

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0025178

Owner: Metropolitan St. Louis Sewer District
Address: 2350 Market Street, St. Louis, MO 63103

Continuing Authority:
Address: Same as above

Facility Name: MSD, Bissell Point Wastewater Treatment Plant
Facility Address: 10 East Grand Avenue, St. Louis, MO 63147

Legal Description: See Page 2
UTM Coordinates: See Page 2

Receiving Stream: See Page 2
First Classified Stream and ID: See Page 2
USGS Basin & Sub-watershed No.: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

See Page 2


This permit authorizes only wastewater and stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

January 1, 2018
Effective Date

October 1, 2018
Modification Date


Edward B. Galbraith, Director, Division of Environmental Quality

December 31, 2022
Expiration Date


Chris Wieberg, Director, Water Protection Program

FACILITY DESCRIPTION (continued):

Outfall #001 – POTW – SIC #4952

The use or operation of this facility shall be by or under the supervision of a Certified “A” Operator.

Influent lift station / two (2) coarse mechanical bar screens / six (6) grit detritors / seven (7) comminutors / four (4) 2-pass tanks with coarse bubble diffusers / eight (8) primary clarifiers / six (6) trickling filters / six (6) aeration tanks *not in service* / twelve (12) final clarifiers / chlorination / dechlorination / thirteen (13) sludge belt filter presses / four (4) multiple-hearth incinerators / two (2) ash slurry basins / ash is landfilled / blending occurs when flow is diverted from the primary clarifiers and is combined with effluent prior to discharge – the diverted flow is chlorinated before it combines with effluent.

Design population equivalent is 1,500,000.

Design flow is 150 MGD.

Wet-weather flow that can be treated through preliminary and primary treatment is 350 MGD.

Wet-weather flow that can be treated through secondary treatment is 250 MGD.

Actual flow is 120 MGD.

Design sludge production is 74,369 dry tons/year.

Legal Description:	Landgrant 1342, St. Louis City
UTM Coordinates:	X= 744360, Y= 4284602
Receiving Stream:	Mississippi River (P)
First Classified Stream and ID:	Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.:	(07140101-0401)

Outfall #002 – Stormwater

Legal Description:	Landgrant 1342, St. Louis City
UTM Coordinates:	X= 744364, Y= 4284383
USGS Basin & Sub-watershed No.:	(07140101-0401)

Outfall #003 – Stormwater

Legal Description:	Landgrant 1342, St. Louis City
UTM Coordinates:	X= 743947, Y= 4284233
USGS Basin & Sub-watershed No.:	(07140101-0401)

Outfall #004 – Stormwater

Legal Description:	Landgrant 1342, St. Louis City
UTM Coordinates:	X= 743926, Y= 4284293
USGS Basin & Sub-watershed No.:	(07140101-0401)

Outfall #005 – Stormwater

Legal Description:	Landgrant 1342, St. Louis City
UTM Coordinates:	X= 744066, Y= 4284851
USGS Basin & Sub-watershed No.:	(07140101-0401)

Outfall #006 – Stormwater

Legal Description:	Landgrant 1342, St. Louis City
UTM Coordinates:	X= 744005, Y= 4284937
USGS Basin & Sub-watershed No.:	(07140101-0401)

Combined Sewer Overflow (CSO) Locations #B02-#B61

See Section D. Combined Sewer System Overflow Locations following the permit for the list of CSO locations, UTM coordinates, legal descriptions, and stream information.

OUTFALL #001	TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on January 1, 2018 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/day	24 hr. total
Carbonaceous Biochemical Oxygen Demand ₅ (Note 1, Page 4)	mg/L lbs/day		60	40 83,611	once/weekday***	composite**
Total Suspended Solids (Note 1, Page 4)	mg/L lbs/day		65	45 94,063	once/weekday***	composite**
<i>E. coli</i> (Note 2, Page 4)	#/100mL		1,134	1,134	once/week	grab
Ammonia, Total as N	mg/L	*		*	once/month	composite**
Oil & Grease	mg/L	15		10	once/month	grab
Chlorine, Total Residual (Note 3, Page 4)	µg/L	140		< 130	once/weekday***	grab
Phosphorus, Total as P	mg/L	*		*	once/month	grab
Nitrogen, Total as N	mg/L	*		*	once/month	grab
Nitrate plus Nitrite, Total as N	mg/L	*		*	once/month	grab
Kjeldahl Nitrogen, Total as N	mg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>FEBRUARY 28, 2018</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Silver, Total Recoverable	µg/L	*		*	quarterly*****	composite**
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>APRIL 28, 2018</u> .						
EFFLUENT PARAMETER(S)	UNITS	MINIMUM		MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH – Units ****	SU	6.0		9.0	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>FEBRUARY 28, 2018</u> .						

* Monitoring requirement only.

** A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at regular intervals no more than 30 minutes apart by an automatic sampling device. If there is a failure of the automatic sampling device, then the composite sample may be made up from a minimum of four grab samples collected within a 24-hour period with a minimum of 2 hours between each grab sample, until the automatic sampling device is repaired or replaced. Other alternate compositing approaches will be allowed with department approval.

*** Once each weekday means: Monday, Tuesday, Wednesday, Thursday, and Friday.

**** pH is measured in pH units and is not to be averaged.

***** See table on Page 4 for quarterly sampling requirements.

Quarterly Minimum Sampling Requirements			
Quarter	Months	Silver, Total Recoverable	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

Note 1 – Additional effluent sampling from Outfall #001 shall be conducted according to the requirements of Special Condition #2.

Note 2 – Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 3 – This permit contains a Total Residual Chlorine (TRC) limit.

- (a) The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 140 µg/L (daily maximum limit) and 70 µg/L (monthly average limit). The monthly average limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit. Measured values as a monthly average greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation.
- (b) Chlorination during the non-recreational months (November 1 through March 31) is not required. An actual analysis for TRC is not necessary when chlorination is not occurring.
- (c) Do not chemically de-chlorinate **if it is not needed to meet the limits in your permit.**
- (d) If no chlorine was used in a given sampling period, an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary. Simply report as “0 µg/L” for TRC and “NA” for DO.

OUTFALL #001	TABLE A-2 WHOLE EFFLUENT TOXICITY FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on January 1, 2018 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Acute Whole Effluent Toxicity (Note 4)	TU _a	*			once/year	composite**
MONITORING REPORTS SHALL BE SUBMITTED DURING THE 1 ST , 2 ND , 3 RD , AND 5 TH YEARS OF THE PERMIT CYCLE; THE FIRST REPORT IS DUE <u>JUNE 28, 2018</u> .						
Chronic Whole Effluent Toxicity (Note 4)	TU _c	*			once/permit cycle	composite**
MONITORING REPORTS SHALL BE SUBMITTED DURING THE 4 TH YEAR OF THE PERMIT CYCLE; THE FIRST REPORT IS DUE <u>JUNE 28, 2021</u> .						

* Monitoring requirement only.

** A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at regular intervals no more than 30 minutes apart by an automatic sampling device. If there is a failure of the automatic sampling device, then the composite sample may be made up from a minimum of four grab samples collected within a 24-hour period with a minimum of 2 hours between each grab sample, until the automatic sampling device is repaired or replaced. Other alternate compositing approaches will be allowed with department approval.

Note 4 – A Whole Effluent Toxicity (WET) test is to be conducted once per year: Acute WET tests are to be completed and submitted in the 1st, 2nd, 3rd, and 5th years of the permit cycle. The Chronic WET test is to be completed and submitted in the 4th year of the permit cycle. See Special Conditions #19 and #20 for additional requirements.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I, II, & III standard conditions dated August 1, 2014, May 1, 2013, and March 1, 2015, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

1. Electronic Discharge Monitoring Report (eDMR) Submission System.

- (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
- (b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
 - (1) Collection System Maintenance Annual Reports;
 - (2) Sludge/Biosolids Annual Reports;
 - i. In addition to the annual Sludge/Biosolids report submitted to the department, the permittee must submit Sludge/Biosolids Annual Reports electronically using EPA's NPDES Electronic Reporting Tool ("NeT") (<https://cdx.epa.gov/>).
 - (3) Municipal Separate Storm Sewer System (MS4) Program Reports;
 - (4) Pretreatment Program Reports; and
 - (5) Any additional report required by the permit excluding bypass reporting.After such a system has been made available by the department, required data shall be directly input into the system by the next report due date.
- (c) Other actions. The following shall be submitted electronically after such a system has been made available by the department:
 - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
 - (2) Notices of Termination (NOTs);
 - (3) No Exposure Certifications (NOEs);
 - (4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs); and
 - (5) Bypass reporting, See Special Condition #12 for 24-hr. bypass reporting requirements.
- (d) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
- (e) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.

2. Blending:

- (a) Sampling for Carbonaceous Biochemical Oxygen Demand₅ and Total Suspended Solids of the effluent discharged from Outfall #001 shall occur daily when:
 - (1) when diverted flows from the primary clarifiers are combined with fully treated flows, or
 - (2) at any time that blending occurs at the facility due to reasons not listed in this condition.Sampling methodologies specified in this permit apply while sampling during blending events.
- (b) If blending occurs during the month, the facility shall report to the Department via the Electronic Discharge Monitoring Report (eDMR) Submission System the days when blending occurred.

3. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued:

- (a) To comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
- (b) To incorporate an approved pretreatment program pursuant to 40 CFR 403.8(a).

4. Treatment facility outfalls must be clearly marked in the field. Stormwater outfalls shall either be marked in the field or clearly marked on a map and maintained with the Stormwater Pollution Prevention Plan.

C. SPECIAL CONDITIONS (continued)

5. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
6. Report as no-discharge when a discharge does not occur during the report period.
7. Changes in existing pollutants or the addition of new pollutants to the treatment facility

The permittee must provide adequate notice to the Director of the following:

- (a) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and
 - (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (c) For purposes of this paragraph, adequate notice shall include information on:
 - (1) the quality and quantity of effluent introduced into the POTW, and
 - (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
8. Reporting of Non-Detects:
- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
 - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
 - (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
 - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
 - (f) When calculating monthly averages, one-half of the method detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the "<MDL" shall be reported as indicated in item (c).
9. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
10. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the Department for review and, if deemed necessary, approval.
11. The permittee has developed and is currently implementing a program for maintenance and repair of the collection system. The permittee's program is consistent with the US EPA's Guide for Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall continue to submit semi-annual and annual reports as required by the federal consent decree entered in the matter of *The United States et al. v. The Metropolitan St. Louis Sewer District, No. 4:07-CV-1120 (E.D. Mo.)* which was entered on April 27, 2012.
12. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the St. Louis Regional Office during normal business hours or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: <http://dnr.mo.gov/modnrcag/> or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Once an electronic reporting system compliant with 40 CFR Part 127, the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, is available all bypasses must be reported electronically via the new system. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass.
13. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
14. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.

C. SPECIAL CONDITIONS (continued)

15. At least one (1) warning sign shall be placed on each side of the facility enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.
16. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.
17. An all-weather access road shall be provided to the treatment facility.
18. The discharge from the wastewater treatment facility shall be conveyed to the receiving stream via a closed pipe or a paved or rip-rapped open channel. Sheet or meandering drainage is not acceptable. The outfall sewer shall be protected against the effects of floodwater, ice or other hazards as to reasonably insure its structural stability and freedom from stoppage. The outfall shall be maintained so that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.
19. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:
 - (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the most recent edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour, static, non-renewal toxicity tests with the following species:
 - The fathead minnow, *Pimephales promelas* (Acute Toxicity EPA Test Method 2000.0).
 - The daphnid, *Ceriodaphnia dubia* (Acute Toxicity EPA Test Method 2002.0).
 - (b) Chemical and physical analysis of the upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
 - (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (d) The Allowable Effluent Concentration (AEC) for this facility is 13.6% with the dilution series being: 56%, 28%, 14%, 7%, and 3.5%.
 - (e) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.

The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of acute toxic units ($TU_a = 100/LC_{50}$) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration 50 Percent (LC_{50}) is the effluent concentration that would cause death in 50 percent of the test organisms at a specific time.
20. Chronic Whole Effluent Toxicity (WET) tests shall be conducted as follows:
 - (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the most recent edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 7-day, static, renewal toxicity tests with the following species:
 - The fathead minnow, *Pimephales promelas* (Survival and Growth Test Method 1000.0).
 - The daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
 - (b) Chemical and physical analysis of the upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
 - (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (d) The Allowable Effluent Concentration (AEC) for this facility is 1.5%, the dilution series is: 37.5%, 7.5%, 1.5%, 0.3%, and 0.06%.
 - (e) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.
 - (f) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of chronic toxic units ($TU_c = 100/IC_{25}$) reported according to the *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* chapter on report preparation and test review. The 25 percent Inhibition Effect Concentration (IC_{25}) is the toxic or effluent concentration that would cause 25 percent reduction in mean young per female or in growth for the test populations.

C. SPECIAL CONDITIONS (continued)

21. **Pretreatment:** The permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of 10 CSR 20-6.100. The approved pretreatment program is hereby incorporated by reference.
- (a) The permittee shall submit to the Department via the Electronic Discharge Monitoring Report (eDMR) Submission System on or before September 30th of each year a report briefly describing its pretreatment activities during the previous calendar year. At a minimum, the report shall include the following:
- (1) An updated list of the Permittee's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Permittee shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The Permittee shall also list the Industrial Users that are subject only to local Requirements;
 - (2) A summary of the status of Industrial User compliance over the reporting period;
 - (3) A summary of compliance and enforcement activities (including inspections) conducted by the Permittee during the reporting period; and
 - (4) Any other relevant information requested by the Department.
- (b) Pursuant to 40 CFR 122.44(j)(2)(ii), the permittee shall submit to the Department a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1) within 180 days of the effective date of this permit.

22. The permittee shall collect the following information on wastes accepted under the Hauled Waste Acceptance Program at each of the designated acceptance points: source types, volumes, delivery dates, and the identity of the specific sources of all non-domestic wastes. This information shall be maintained by the permittee and shall be made available to the department upon request.

23. **Sewer Extension Authority Supervised Program:**

The Department approved the Sewer Extension Authority Supervised Program for the St. Louis Metropolitan Sewer District (MSD) to regulate and approve construction of sanitary sewers and pump stations, which are tributary to this wastewater treatment facility on November 15, 2017. MSD shall act as the continuing authority for the operation, maintenance, and modernization of the constructed collection system. This approval may be modified or revoked by the Department if the wastewater collection, transportation, or treatment facilities reach their design capacity, if the treatment facility falls into chronic noncompliance with the permit, or if the permittee fails to follow the terms and conditions of the submitted and approved program.

This permit may be reopened and modified or alternatively revoked and reissued to incorporate new or modified conditions to the Sewer Extension Authority Supervised Program, if information indicates changes are necessary to assure compliance with Missouri's Clean Water Law and associated regulations. When any of the above mentioned conditions occur, the permittee will be notified prior to any modifications of this permit condition.

An annual report on the Sewer Extension Authority Supervised Program must be submitted by January 28 of each year to the Missouri Department of Natural Resources' Water Protection Program's Engineering Section. The electronic submittals may be emailed to DNR.WPPEngineerSection@dnr.mo.gov. Detailed project information on leakage, deflection, and inspection shall be available for review upon request. The report shall contain the following for each sewer extension:

- (a) Name of sewer extension;
- (b) Length of sewer and force main;
- (c) Capacity of each new or upgraded pump station, if applicable;
- (d) Date sewer extension permit is issued;
- (e) Date sewer extension construction is accepted;
- (f) The ultimate receiving wastewater treatment facility; and
- (g) The remaining long term average capacity of each wastewater treatment facility.

The Department's Water Protection Program, Engineering Section will reevaluate the MSD's Authority Supervised Program for reauthorization when they file an application for permit renewal to determine if it is current, complete, and meets the requirements of 10 CSR 20-8 Design Guides. Once the Sewer Extension Authority Supervised Program is reauthorized or denied, this condition will be updated accordingly.

24. **Expanded Effluent Testing:**

Permittee must sample and analyze for the pollutants listed in 40 CFR 122.21 Appendix J, Table 2 in addition to Iron and Aluminum. Pursuant to 40 CFR 122.21(j)(4) the permittee shall provide this data with the permit renewal application from a minimum of three samples taken within four and one-half years prior to the date of the permit application. Samples must be representative of the seasonal variation in the discharge from each POTW outfall.

C. SPECIAL CONDITIONS (continued)

25. Stormwater Pollution Prevention Plan (SWPPP): A SWPPP must be developed and implemented within 180 days of the effective date of this permit. Through implementation of the SWPPP, the permittee shall minimize the release of pollutants in stormwater from the facility to the waters of the state. The SWPPP shall be developed in consultation with the concepts and methods described in the following document: Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.
- (a) The SWPPP must identify any stormwater outfall from the facility and Best Management Practices (BMPs) used to prevent or reduce the discharge of contaminants in stormwater. The stormwater outfalls shall either be marked in the field or clearly marked on a map and maintained with the SWPPP.
 - (b) The SWPPP must include a schedule and procedures for a once per month routine site inspection.
 - (1) The monthly routine inspection shall be documented in a brief written report, which shall include:
 - i. The person(s) conducting the inspection.
 - ii. The inspection date and time.
 - iii. Weather information for the day of the inspection.
 - iv. Precipitation information for the entire period since the last inspection.
 - v. Description of the discharges observed, including visual quality of the discharges (sheen, turbid, etc.).
 - vi. Condition of BMPs
 - vii. If BMPs were replaced or repaired.
 - viii. Observations and evaluations of BMP effectiveness.
 - (2) Any deficiency observed during the routine inspection must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report.
 - (3) The routine inspection reports must be kept onsite with the SWPPP and maintained for a period of five (5) years.
 - (4) The routine inspection reports shall be made available to Department personnel upon request.
 - (c) The SWPPP must include a schedule and procedures for a once per year comprehensive site inspection.
 - (1) The annual comprehensive inspection shall be documented in a written report, which shall include:
 - i. The person(s) conducting the inspection.
 - ii. The inspection date and time.
 - iii. Findings from the areas of your facility that were examined;
 - iv. All observations relating to the implementation of your control measures including:
 - 1. Previously unidentified discharges from the site,
 - 2. Previously unidentified pollutants in existing discharges,
 - 3. Evidence of, or the potential for, pollutants entering the drainage system;
 - 4. Evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, and
 - 5. Additional control measures needed to address any conditions requiring corrective action identified during the inspection.
 - v. Any required revisions to the SWPPP resulting from the inspection;
 - vi. Any incidence of noncompliance observed or a certification stating that the facility is in compliance.
 - (2) Any deficiency observed during the comprehensive inspection must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report.
 - (3) The comprehensive inspection reports must be kept onsite with the SWPPP and maintained for a period of five (5) years.
 - (4) The comprehensive inspection reports shall be made available to Department personnel upon request.
 - (d) The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested.
 - (e) The SWPPP must be reviewed and updated at a minimum once per permit cycle, as site conditions or control measures change.

C. SPECIAL CONDITIONS (continued)

26. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP.
- (a) Permittee shall adhere to the following minimum Best Management Practices (BMPs):
- (1) Minimize the exposure of industrial material storage areas, loading and unloading areas, dumpsters and other disposal areas, maintenance activities, and fueling operations to rain, snow, snowmelt, and runoff, by locating industrial materials and activities inside or protecting them with storm resistant coverings, if warranted and practicable.
 - (2) Provide good housekeeping practices on the site to prevent potential pollution sources from coming into contact with stormwater and provide collection facilities and arrange for proper disposal of waste products, including sludge.
 - (3) Implement a maintenance program to ensure that the structural control measures and industrial equipment is kept in good operating condition and to prevent or minimize leaks and other releases of pollutants.
 - (4) Prevent or minimize the spillage or leaks of fluids, oil, grease, fuel, etc. from equipment and vehicle maintenance, equipment and vehicle cleaning, or activities.
 - (5) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed.
 - (6) Provide stormwater runoff controls to divert, infiltrate, reuse, contain, or otherwise minimize pollutants in the stormwater discharge.
 - (7) Enclose or cover storage piles of salt or piles containing salt, used for deicing or other commercial or industrial purposes.
 - (8) Provide training to all employees who; work in areas where industrial materials or activities are exposed to stormwater, are responsible for stormwater inspections, are members of the Pollution Prevention Team. Training must cover the specific control measures and monitoring, inspection, planning, reporting and documentation requirements of this permit. Training is recommended annually for any applicable staff and whenever a new employee is hired who meets the description above.
 - (9) Eliminate and prevent unauthorized non-stormwater discharges at the facility.
 - (10) Minimize generation of dust and off-site tracking of raw, final, or waste materials by implementing appropriate control measures.
27. Nine Minimum Controls.
- The permittee will implement the Nine Minimum Controls as specified by the U.S. EPA Combined Sewer Overflow (CSO) Policy dated April 19, 1994, (59 FR 18688), as described in MSD's CSO Long-Term Control Plan (LTCP) Update Report (approved by the Department June 1, 2011) and subsequent approved modifications to the LTCP. MSD is required by the federal consent decree entered on April 27, 2012 in the matter of *The United States et al. v. The Metropolitan St. Louis Sewer District, No. 4:07-CF-1120 (E.D. Mo.)* to implement the approved, revised LTCP.
- Control 1 – Proper Operation and Maintenance Programs;
Control 2 – Maximum Use of the Collection System for Storage;
Control 3 – Review and Modification of Pretreatment Requirements;
Control 4 – Maximization of Flow to the POTW for Treatment;
Control 5 – Dry Weather Flows from CSOs are prohibited;
Control 6 – Control of Solid and Floatable Materials in CSOs;
Control 7 – Pollution Prevention;
Control 8 – Public Notification; and
Control 9 – Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls.
- The permittee shall continue to submit the Nine Minimum Controls Annual Report with the Annual Report required by the federal consent decree entered in the matter of *The United States et al. v. The Metropolitan St. Louis Sewer District, No. 4:07-CF-1120 (E.D. Mo.)* which was entered on April 27, 2012.
28. The permittee is authorized to discharge from the Combined Sewer Overflow (CSO) locations identified below in Section D. Combined Sewer System Overflow Locations. New outfalls may be added through a permit modification at the request of the permittee.

D. COMBINED SEWER SYSTEM OVERFLOW LOCATIONS

The letter “B” was added before the CSO outfall number to distinguish between CSO outfalls and stormwater outfalls.

Outfall #B02 (MSD GIS ID # GIS-4684161)

UTM Coordinates (FIPS Zone 2401): X= 897368, Y= 997783
UTM Coordinates (Zone 15): X= 741305, Y= 4273090
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0507)

Outfall #B03 (MSD GIS ID # GIS-6999304)

UTM Coordinates (FIPS Zone 2401): X= 899495, Y= 999701
UTM Coordinates (Zone 15): X= 741937, Y= 4273693
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0507)

Outfall #B04 (MSD GIS ID # GIS-4683517)

UTM Coordinates (FIPS Zone 2401): X= 902032, Y= 1001900
UTM Coordinates (Zone 15): X= 742692, Y= 4274384
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0507)

Outfall #B05 (MSD GIS ID # GIS-1885967)

UTM Coordinates (FIPS Zone 2401): X= 903742, Y= 1003262
UTM Coordinates (Zone 15): X= 743202, Y= 4274813
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B06 (MSD GIS ID # GIS-6999306)

UTM Coordinates (FIPS Zone 2401): X= 904451, Y= 1003921
UTM Coordinates (Zone 15): X= 743412, Y= 4275020
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B07 (MSD GIS ID # GIS-1046481)

UTM Coordinates (FIPS Zone 2401): X= 905925, Y= 1005513
UTM Coordinates (Zone 15): X= 743849, Y= 4275517
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B08 (MSD GIS ID # GIS-4684125)

UTM Coordinates (FIPS Zone 2401): X= 906582, Y= 1006395
UTM Coordinates (Zone 15): X= 744041, Y= 4275792
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B09 (MSD GIS ID # GIS-1052324)

UTM Coordinates (FIPS Zone 2401): X= 907156, Y= 1007271
UTM Coordinates (Zone 15): X= 744209, Y= 4276064
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B10 (MSD GIS ID # GIS-2500263)

UTM Coordinates (FIPS Zone 2401): X= 907555, Y= 1008023
UTM Coordinates (Zone 15): X= 744325, Y= 4276296
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B11 (MSD GIS ID # GIS-4684126)

UTM Coordinates (FIPS Zone 2401): X= 907934, Y= 1008729
UTM Coordinates (Zone 15): X= 744434, Y= 4276514
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B12 (MSD GIS ID # GIS-4683524)

UTM Coordinates (FIPS Zone 2401): X= 908331, Y= 1009799
UTM Coordinates (Zone 15): X= 744546, Y= 4276844
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B13 (MSD GIS ID # GIS-4683525)

UTM Coordinates (FIPS Zone 2401): X= 908342, Y= 1009817
UTM Coordinates (Zone 15): X= 744549, Y= 4276849
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B14 (MSD GIS ID # GIS-4684062)

UTM Coordinates (FIPS Zone 2401): X= 908833, Y= 1010827
UTM Coordinates (Zone 15): X= 744691, Y= 4277161
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B15 (MSD GIS ID # GIS-4684061)

UTM Coordinates (FIPS Zone 2401): X= 909185, Y= 1011725
UTM Coordinates (Zone 15): X= 744791, Y= 4277438
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B16 (MSD GIS ID # GIS-1021590)

UTM Coordinates (FIPS Zone 2401): X= 909471, Y= 1012411
UTM Coordinates (Zone 15): X= 744872, Y= 4277649
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B17 (MSD GIS ID # GIS-4684351)

UTM Coordinates (FIPS Zone 2401): X= 909779, Y= 1013397
UTM Coordinates (Zone 15): X= 744958, Y= 4277952
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B18 (MSD GIS ID # GIS-4684085)

UTM Coordinates (FIPS Zone 2401): X= 909845, Y= 10136641
UTM Coordinates (Zone 15): X= 744976, Y= 4278028
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B19 (MSD GIS ID # GIS-6999305)

UTM Coordinates (FIPS Zone 2401): X= 910135, Y= 1014357
UTM Coordinates (Zone 15): X= 745058, Y= 4278248
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B20 (MSD GIS ID # GIS-4684033)

UTM Coordinates (FIPS Zone 2401): X= 910483, Y= 1015537
UTM Coordinates (Zone 15): X= 745155, Y= 4278611
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B21 (MSD GIS ID # GIS-4683989)

UTM Coordinates (FIPS Zone 2401): X= 911147, Y= 1018238
UTM Coordinates (Zone 15): X= 745334, Y= 4279439
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B33 (MSD GIS ID # GIS-4683791)

UTM Coordinates: (FIPS Zone 2401): X= 911004, Y= 1025183
UTM Coordinates (Zone 15): X= 745233, Y= 4281555
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B34 (MSD GIS ID # GIS-4683613)

UTM Coordinates: (FIPS Zone 2401):	X= 910992, Y= 1025216
UTM Coordinates (Zone 15):	X= 745229, Y= 4281565
Receiving Stream:	Mississippi River (P)
First Classified Stream and ID:	Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.:	(07140101-0403)

Outfall #B35 (MSD GIS ID # GIS-4683505)

UTM Coordinates: (FIPS Zone 2401):	X= 910845, Y= 1026414
UTM Coordinates (Zone 15):	X= 745175, Y= 4281929
Receiving Stream:	Mississippi River (P)
First Classified Stream and ID:	Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.:	(07140101-0403)

Outfall #B36 (MSD GIS ID # GIS-4683506)

UTM Coordinates: (FIPS Zone 2401): X= 910844, Y= 1026420
UTM Coordinates (Zone 15): X= 745174, Y= 4281931
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B37 (MSD GIS ID # GIS-7000286)

UTM Coordinates: (FIPS Zone 2401): X= 910388, Y= 1028353
UTM Coordinates (Zone 15): X= 745019, Y= 4282516
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B38 (MSD GIS ID # GIS-4683612)

UTM Coordinates: (FIPS Zone 2401): X= 910357, Y= 1028601
UTM Coordinates (Zone 15): X= 745008, Y= 4282592
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B41 (MSD GIS ID # GIS-4683751)

UTM Coordinates: (FIPS Zone 2401): X = 909654, Y = 1031245
UTM Coordinates (Zone 15): X = 744771, Y = 4283392
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B42 (MSD GIS ID # GIS-4683753)

UTM Coordinates: (FIPS Zone 2401): X= 909404, Y= 1031984
UTM Coordinates (Zone 15): X= 744689, Y= 4283615
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B43 (MSD GIS ID # GIS-6998232)

Outfall #B-43 (MSD GIS ID # GIS-6998252)
 UTM Coordinates (FIPS Zone 2401): X= 908905, Y= 1034422
 UTM Coordinates (Zone 15): X= 744517, Y= 4284354
 Receiving Stream: Mississippi River (P)
 First Classified Stream and ID: Mississippi River (P) (1707.02)
 USGS Basin & Sub-watershed No.: (07140101-0403)

Outfall #B44 (MSD GIS ID # GIS-4683756)

Outfall #B44 (MSD GIS ID # GIS-4683/56)
 UTM Coordinates: (FIPS Zone 2401): X= 908850, Y= 1034506
 UTM Coordinates (Zone 15): X= 744499, Y= 4284379
 Receiving Stream: Mississippi River (P)
 First Classified Stream and ID: Mississippi River (P) (1707.02)
 USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B45 (MSD GIS ID # GIS-4683504)

Outfall #B45 (MSD GIS ID # GIS-4683504)
 UTM Coordinates: (FIPS Zone 2401): X= 907306, Y= 1037202
 UTM Coordinates (Zone 15): X= 744006, Y= 4285188
 Receiving Stream: Mississippi River (P)
 First Classified Stream and ID: Mississippi River (P) (1707.02)
 USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B46 (MSD GIS ID # GIS-4683503)

UTM Coordinates: (FIPS Zone 2401): X= 907268, Y= 1037249
UTM Coordinates (Zone 15): X= 743994, Y= 4285202
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B47 (MSD GIS ID # GIS-4684567)

UTM Coordinates: (FIPS Zone 2401): X= 903680, Y= 1041456
UTM Coordinates (Zone 15): X= 742865, Y= 4286454
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B48 (MSD GIS ID # GIS-4683444)

UTM Coordinates: (FIPS Zone 2401): X= 901895, Y= 1044760
UTM Coordinates (Zone 15): X= 742293, Y= 4287447
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B49 (MSD GIS ID # GIS-4683409)

UTM Coordinates: (FIPS Zone 2401): X= 901282, Y= 1046886
UTM Coordinates (Zone 15): X= 742089, Y= 4288089
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B50 (MSD GIS ID # GIS-4683494)

UTM Coordinates: (FIPS Zone 2401): X= 901198, Y= 1051740
UTM Coordinates (Zone 15): X= 742023, Y= 4289569
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B51 (MSD GIS ID # GIS-4684581)

UTM Coordinates: (FIPS Zone 2401): X= 899661, Y= 1054451
UTM Coordinates (Zone 15): X= 741532, Y= 4290382
Receiving Stream: Maline Creek (C)
First Classified Stream and ID: Maline Creek (C) (3839)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B52 (MSD GIS ID # GIS-4683470)

UTM Coordinates: (FIPS Zone 2401): X= 900842, Y= 1053837
UTM Coordinates (Zone 15): X= 741897, Y= 4290205
Receiving Stream: Maline Creek (C)
First Classified Stream and ID: Maline Creek (C) (3839)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B57 (MSD GIS ID # GIS-1046987)

UTM Coordinates: (FIPS Zone 2401): X= 899003, Y= 999318
UTM Coordinates (Zone 15): X= 741790, Y= 4273572
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0507)

Outfall #B59 (MSD GIS ID # GIS-1035234)

UTM Coordinates: (FIPS Zone 2401): X= 879204, Y= 1049223
UTM Coordinates (Zone 15): X= 735341, Y= 4288618
Receiving Stream: Gingras Creek (C)
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960)
USGS Basin & Sub-watershed No.: (07140101-0401)

Outfall #B61 (MSD GIS ID # GIS-4683942)

UTM Coordinates: (FIPS Zone 2401): X= 911400, Y= 1020307
UTM Coordinates (Zone 15): X= 745395, Y= 4280072
Receiving Stream: Mississippi River (P)
First Classified Stream and ID: Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.: (07140101-0403)

**Missouri Department of Natural Resources
Factsheet Addendum
For Pretreatment Program Modification
#MO-0025178
Metropolitan St. Louis Sewer District**

This addendum gives pertinent information regarding minor/simple modification(s) to the above listed operating permit for a public comment process.

An addendum is not an enforceable part of a Missouri State Operating Permit.

In accordance with the state Clean Water Law, Chapter 644, RSMo and the Federal Clean Water Act, the Metropolitan St. Louis Sewer District (MSD) has an approved pretreatment program to meet the requirements of 40 CFR Part 403 and 10 CSR 20-6.100. The Department, as Approval Authority, reviewed the proposed program modifications and, by issuance of this permit, grants its approval as required by 40 CFR 403.18 and 10 CSR 20-6.100.

Part I – Pretreatment Program Modification

The pretreatment program modification:

The MSD's ordinance No. 12559 was revised to implement a recommendation that was made in the May 14, 2018, report of the Department's February 14, 2018, inspection of MSD's pretreatment program. In the inspection report, the Department highly recommended that MSD modify its ordinance to clearly identify the Control Authority's legal authority by November 12, 2018. MSD should consider incorporation of the definition of significant industrial user, as found in 40 CR 403.3(v), into ordinance to clearly identify criteria.

MSD modified its ordinance to add the definition of significant industrial user or SIU and non-significant industrial user or NSCIU and the annual certification statement for the NSCIU.

☒ - The Department is not required public notice this program modification

This is a non-substantial modification of the district's pretreatment program, according to the 40 CFR 403.18(b)(1). These changes do not require public notice and are hereby approved pursuant to 40 CFR 403.18 (adopted in 10 CSR 20-6.100) and the Metropolitan St. Louis Sewer District should proceed to implement the pretreatment program requirements.

Part II – Reason for the NPDES Permit Modification

In accordance with 40 CFR 403.18(e), "all modifications shall be incorporated into the POTW's NPDES permit upon approval. The permit will be modified to incorporate the approved modification in accordance with 40 CFR 122.63(g)." Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of part 124. Any permit modification not processed as a minor modification under this section must be made for cause and with part 124 draft permit and public notice as required in § 122.62. Minor modifications include:

(g) Incorporate conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 (or a modification thereto that has been approved in accordance with the procedures in 40 CFR 403.18) as enforceable conditions of the POTW's permits.

Date of addendum: 09/25/2018

Completed by:

Todd Blanc,
Pretreatment Coordinator
Water Protection Program
314-416-2064
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MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0025178
MSD, BISSELL POINT WASTEWATER TREATMENT PLANT

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Major.

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:

Influent lift station / two (2) coarse mechanical bar screens / six (6) grit detritors / seven (7) comminutors / four (4) 2-pass tanks with coarse bubble diffusers / eight (8) primary clarifiers / six (6) trickling filters / six (6) aeration tanks *not in service* / twelve (12) final clarifiers / chlorination / dechlorination / thirteen (13) sludge belt filter presses / four (4) multiple-hearth incinerators / two (2) ash slurry basins / ash is landfilled / blending occurs when flow is diverted from the primary clarifiers and is combined with effluent prior to discharge – the diverted flow is chlorinated before it combines with effluent.

Application Date: 07/13/16

Expiration Date: 01/08/17

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	232.5	Equivalent to Secondary	Domestic
#002-#006	<i>Stormwater Outfalls</i>		
#B02-#B61	<i>Combined Sewer Overflow Outfalls</i>		

Facility Performance History:

This facility was last inspected on March 16, 2017. The facility was noted in the inspection report as not complying with influent monitoring requirements listed in the previous permit. This issue has been addressed in this permit through the removal of the removal efficiency requirement. A review of the past five years of monitoring data submitted by the permittee shows TSS exceedances in June 2015 and December 2015. No other exceedances were reported.

Comments:

The previous permit established monitoring requirements and/or limits for flow, BOD₅, TSS, pH, Oil & Grease, and Settleable Solids in Outfalls #002, #003, and #004. These parameters have all been removed from the permit and replaced with a requirement to develop and implement a Stormwater Pollution Prevention Plan (SWPPP). See Special Conditions #25 and #26.

Comments (continued):

Influent CBOD₅ and TSS monitoring will not be required to determine removal efficiency. This facility receives less concentrated wastewater from the sewer system. Because the less concentrated influent is not a result of excessive infiltration, this facility qualifies to have the removal efficiency requirement removed and a mass loading limitations put in place for CBOD₅ and TSS per [40 CFR 133.103(e)].

Changes in this permit include the addition of Voluntary Early Nutrient Monitoring Program effluent parameters at the request of the permittee in order to simplify the reporting process. Chronic WET monitoring of the effluent has also been added. Changes in this permit also include the removal of silver effluent limits and arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc, cyanide, and total toxic organics monitoring. Monitoring and limits have also been removed for stormwater outfalls. See Part VI of the Fact Sheet for further information regarding the addition and removal of effluent parameters.

Special conditions were updated to include the addition of reporting of Non-detects requirements, bypass reporting requirements, chronic WET testing requirements, eDMR reporting requirements, expanded effluent testing requirements, and requirements for the development and implementation of a SWPPP.

Part II – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], the permittee shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Owned or operated by or for a

☐ - Municipalities

☐ - Federal agency

☐ - County

☒ - Public Sewer District

☐ - State agency

☐ - Private Sewer Company regulated by the Public Service Commission

☐ - Public Water Supply Districts

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) or fifty (50) or more service connections.

This facility currently requires an operator with an A Certification Level. Please see **Appendix - Classification Worksheet**. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Operator's Name: Rebecca Coyle

Certification Number: 3245

Certification Level: A

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part III– Operational Monitoring

☒ - As per [10 CSR 20-9.010(4)], the facility is required to conduct operational monitoring.

Part IV – Receiving Stream Information

RECEIVING STREAM(S) TABLE: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Mississippi River	P	1707.02	AQL, SCR, HHP, IRR, LWV, DWS, IND	07140101-0401	Direct Discharge

*As per 10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission's water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1st classified receiving stream's beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

AQL = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: **WWH** = Warm Water Habitat; **CDF** = Cold-water fishery (Current narrative use is cold-water habitat.); **CLF** = Cool-water fishery (Current narrative use is cool-water habitat); **EAH** = Ephemeral Aquatic Habitat; **MAH** = Modified Aquatic Habitat; **LAH** = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

WBC = Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A = Whole body contact recreation that supports swimming uses and has public access;

WBC-B = Whole body contact recreation that supports swimming;

SCR = Secondary Contact Recreation (like fishing, wading, and boating).

10 CSR 20-7.031(1)(C)3. to 7.:

HHP (formerly HHH) = Human Health Protection as it relates to the consumption of fish;

IRR = Irrigation for use on crops utilized for human or livestock consumption;

LWW = Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);

DWS = Drinking Water Supply;

IND = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)

WSA = Storm- and flood-water storage and attenuation; **WHP** = Habitat for resident and migratory wildlife species;

WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; **WHC** = Hydrologic cycle maintenance.

10 CSR 20-7.031(6): **GRW** = Groundwater

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (C, E, P, P1)	LOW-FLOW VALUES (CFS)*		
	1Q10	7Q10	30Q10
Mississippi River (P)	55,595	59,319	65,541

* - Data from USGS Gauge Station 07010000 located on the Mississippi River at St. Louis, MO

MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) [10 CSR 20-7.031(5)(A)4.B.(II)(a)]			ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(5)(A)4.B.(II)(b)]		
1Q10	7Q10	30Q10	1Q10	7Q10	30Q10
13,899	14,830	16,385	1,389.9	1,483.0	NA

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part V – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

☒ - The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(o); 40 CFR Part 122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions. Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

☒ - Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justifies the application of a less stringent effluent limitation.

- **CBOD₅ and TSS.** This facility's secondary treatment process was constructed with trickling filters and activated sludge in series. Since then, Anheuser-Busch has improved its pretreatment operations to reduce the strength of its discharge to the facility. Because of this, the wastewater loading is insufficient to sustain both processes in series and MSD has taken the activated sludge portion of the process off-line. Without the activated sludge process, this facility is a trickling filter with equivalent to secondary treatment. Effluent limits for CBOD₅ and TSS have been adjusted to reflect this change in the process.

☒ - Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

- **pH.** 6.0-9.0 SU pH limitations [10 CSR 20-7.015] are protective of the water quality standard [10 CSR 20-7.031(5)(E)], due to the buffering capacity of the mixing zone.
- **Silver.** Effluent limits have been replaced by monitoring requirements as statistical analysis conducted determined there to be no reasonable potential for this parameter to cause or contribute to an instream excursion of water quality standards.
- **Total Residual Chlorine.** Effluent limitations were re-calculated for TRC based on updated mixing zone information and on the current Missouri Water Quality Standards for TRC. The newly established limitations are still protective of water quality.
- **Whole Effluent Toxicity.** WET testing requirements were changed from pass/fail to monitoring only for toxic units. This change reflects modifications to Missouri's Effluent Regulation found at 10 CSR 20-7.015. 40 CFR 122.44(d)(1)(ii) requiring the department to establish effluent limitations to control all parameters which have the reasonable potential to cause or contribute to an excursion above any state water quality standard, including state narrative criteria. The previous permit imposed a pass/fail limitation without collecting sufficient numerical data to conduct an analytical reasonable potential analysis. The permit writer has made a reasonable potential determination which concluded the facility does not have reasonable potential at this time but monitoring is required. Implementation of the toxic unit monitoring requirement will allow the department to effect numeric criteria in accordance with water quality standards established under §303 of the CWA.

☒ - The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).

- **Stormwater Outfalls.** The previous permit established monitoring requirements and/or limits for flow, BOD₅, TSS, pH, Oil & Grease, and Settleable Solids in Outfalls #002, #003, and #004. These parameters have all been removed from the permit and replaced with a requirement to develop and implement a Stormwater Pollution Prevention Plan (SWPPP). A review of the past five years of stormwater sampling data submitted by the permittee shows several exceedances of TSS and BOD₅; however, the exceedances are from effluent limits that are not appropriate for stormwater discharges. Additionally, the Department believes the requirements of developing and implementing a SWPPP will still be protective of water quality.
- **General Criteria.** The previous permit contained a special condition which described a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4). In order to comply with 40 CFR 122.44(d)(1), the permit writer has conducted reasonable potential determinations for each general criterion and established numeric effluent limitations where reasonable potential exists. While the removal of the previous permit special condition creates the appearance of backsliding, since this permit establishes numeric limitations where reasonable potential to cause or contribute to an excursion of the general criteria exists the permit maintains sufficient effluent limitations and monitoring requirements in order to protect water quality, this permit is equally protective as compared to the previous permit. Therefore, given this new information, and the fact that the previous permit special condition was not consistent with 40 CFR 122.44(d)(1), an error occurred in the establishment of the general criteria as a special condition of the previous permit. Please see Part VII – Effluent Limits Determination for more information regarding the reasonable potential determinations for each general criterion related to this facility.

ANTIDEGRADATION:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], for domestic wastewater discharge with new, altered, or expanding discharges, the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the department prior to establishing, altering, or expanding discharges. See <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

☒ - No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

For stormwater discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

☒ - The facility must review and maintain stormwater BMPs as appropriate.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

BIOSOLIDS & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, items WQ422 through WQ449.

☒ - Permittee is not authorized to land apply biosolids. Sludge/biosolids are incinerated.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

☒ - The facility is not currently under Water Protection Program enforcement action.

ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. This final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online. In an effort to aid facilities in the reporting of applicable information electronically, the department has created several new forms including operational control monitoring forms and an I&I location and reduction form. These forms are for optional use and can be found on the department's website at the following locations:

Operational Monitoring Lagoon: <http://dnr.mo.gov/forms/780-2801-f.pdf>

Operational Monitoring Mechanical: <http://dnr.mo.gov/forms/780-2800-f.pdf>

I&I Report: <http://dnr.mo.gov/forms/780-2690-f.pdf>

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is non-transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

☒ - The permittee/facility is currently using the eDMR data reporting system.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

☒ - This permittee has an approved pretreatment program in accordance with the requirements of [40 CFR Part 403] and [10 CSR 20-6.100] and is expected to implement and enforce its approved program.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(1)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

☒ - A RPA was conducted on appropriate parameters. Please see **APPENDIX – RPA RESULTS**.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Carbonaceous Biochemical Oxygen Demand 5-day (CBOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

☒ - Influent CBOD₅ and TSS monitoring is not required to determine removal efficiency. This facility receives less concentrated wastewater from the sewer system and qualifies to have the removal efficiency requirement removed in place of mass loading limitations for CBOD₅ and TSS per [40 CFR 133.103(e)].

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):

Sanitary Sewer Overflows (SSOs) are defined as untreated sewage releases and are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSOs result from a variety of causes including blockages, line breaks, and sewer defects that can either allow wastewater to backup within the collection system during dry weather conditions or allow excess stormwater and groundwater to enter and overload the collection system during wet weather conditions. SSOs can also result from lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs include overflows out of manholes, cleanouts, broken pipes, and other into waters of the state and onto city streets, sidewalks, and other terrestrial locations.

Inflow and Infiltration (I&I) is defined as unwanted intrusion of stormwater or groundwater into a collection system. This can occur from points of direct connection such as sump pumps, roof drain downspouts, foundation drains, and storm drain cross-connections or through cracks, holes, joint failures, faulty line connections, damaged manholes, and other openings in the collection system itself. I&I results from a variety of causes including line breaks, improperly sealed connections, cracks caused by soil erosion/settling, penetration of vegetative roots, and other sewer defects. In addition, excess stormwater and groundwater entering the collection system from line breaks and sewer defects have the potential to negatively impact the treatment facility.

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

☒ - The permittee has developed and is currently implementing a program for maintenance and repair of the collection system. The permittee's program is consistent with the US EPA's Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall continue to submit semi-annual and annual reports as required by the federal consent decree entered in the matter of *The United States et al. v. The Metropolitan St. Louis Sewer District*, No. 4:07-CV-1120 (E.D. Mo.) which was entered on April 27, 2012.

SCHEDULE OF COMPLIANCE (SOC):

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(11), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOC's, and attain a greater level of consistency, on April 9, 2015 the Department issued an updated policy on development of SOC's. This policy provides guidance to Permit Writers on the standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as a Cost Analysis for Compliance.

☒ - This permit does not contain a SOC.

SEWER EXTENSION AUTHORITY SUPERVISED PROGRAM:

In accordance with [10 CSR 20-6.010(6)(A)], the department may grant approval of a permittee's Sewer Extension Authority Supervised Program. These approved permittees regulate and approve construction of sanitary sewers and pump stations, which are tributary to this wastewater treatment facility. The permittee shall act as the continuing authority for the operation, maintenance, and modernization of the constructed collection system. See <http://dnr.mo.gov/env/wpp/permits/sewer-extension.htm>.

☒ - The permittee's Sewer Extension Authority Supervised Program has been reauthorized. Please see Special Condition #23 for applicable conditions.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (<http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure (AIP)*, Section II.B.

If parameter-specific numeric exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: <http://dnr.mo.gov/forms/index.html>.

☒ - 10 CSR 20-6.200 and 40 CFR 122.26 includes treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that is located within the confines of the facility, with a design flow of 1.0 MGD or more, or are required to have an approved pretreatment program under 40 CFR part 403, as an industrial activity in which permit coverage is required.

In lieu of requiring sampling in the site-specific permit, the facility is required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP). A facility can apply for conditional exclusion for “no exposure” of industrial activities and materials to stormwater by submitting a permit modification via Form B2 (<http://dnr.mo.gov/forms/780-1805-f.pdf>) appropriate application filing fees and a completed NPDES Form 3510-11 – No Exposure Certification for Exclusion from NPDES Stormwater Permitting (https://www3.epa.gov/npdes/pubs/msgp2008_appendixk.pdf) to the department’s Water Protection Program, Operating Permits Section. Upon approval of the No Exposure Certification, the permit will be modified and the Special Condition to develop and implement a SWPPP will be removed. This information will be reevaluated at the time of renewal.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

☒ - This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

☒ - Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C_e = \frac{(Q_e + Q_s)C - (Q_s \times C_s)}{(Q_e)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration C_e = effluent concentration
 C_s = upstream concentration Q_e = effluent flow
 Q_s = upstream flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA’s “Technical Support Document For Water Quality-based Toxics Control” (EPA/505/2-90-001).

Number of Samples “n”:

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of “n” for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for “n” must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is “n = 4” at a minimum. For Total Ammonia as Nitrogen, “n = 30” is used

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

☒ - A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

☒ - The permittee is required to conduct WET test for this facility.

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(4)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by facilities meeting the following criteria:

- ☒ Facility is a designated Major.
- ☐ Facility continuously or routinely exceeds its design flow.
- ☐ Facility that exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded.
- ☐ Facility (whether primarily domestic or industrial) that alters its production process throughout the year.
- ☐ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- ☒ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- ☒ Facility is a municipality with a Design Flow ≥ 22,500 gpd.
- ☐ Other – please justify.

40 CFR 122.41(m) - BYPASSES:

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

☒ - This facility does not anticipate bypassing.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

☒ - This facility does not discharge to a 303(d) listed stream.

Part VI – Effluent Limits Determination

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Missouri or Mississippi River [10 CSR 20-7.015(2)] | <input type="checkbox"/> Metropolitan No-Discharge [10 CSR 20-7.015(5)] |
| <input type="checkbox"/> Lake or Reservoir [10 CSR 20-7.015(3)] | <input type="checkbox"/> Subsurface Water [10 CSR 20-7.015(7)] |
| <input type="checkbox"/> Losing [10 CSR 20-7.015(4)] | <input type="checkbox"/> All Other Waters [10 CSR 20-7.015(8)] |

OUTFALL #001 – MAIN FACILITY OUTFALL

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Previous Permit Limit	Sampling Frequency	Reporting Frequency	Sample Type ****
Flow	MGD	1	*		*	*/*	Daily	Monthly	T
CBOD ₅	mg/L	1		60	40	40/25	Weekdays	Monthly	C
CBOD ₅	lbs/day	1			83,611	***	Weekdays	Monthly	C
TSS	mg/L	1		65	45	45/30	Weekdays	Monthly	C
TSS	lbs/day	1			94,063	***	Weekdays	Monthly	C
<i>Escherichia coli</i> **	#/100mL	1, 3		1,134	1,134	*/1,134	Weekly	Monthly	G
Ammonia, Total as N	mg/L	2, 3	*		*	*/*	Monthly	Monthly	C
Oil & Grease	mg/L	1, 3	15		10	15/10	Monthly	Monthly	G
Chlorine, Total Residual	µg/L	1, 3	140		< 130	< 130	Weekdays	Monthly	G
Phosphorus, Total as P	mg/L	1, 11	*		*	***	Monthly	Monthly	G
Nitrogen, Total as N	mg/L	1, 11	*		*	***	Monthly	Monthly	G
Nitrate plus Nitrite, Total as N	mg/L	11	*		*	***	Monthly	Monthly	G
Kjeldahl Nitrogen, Total as N	mg/L	11	*		*	***	Monthly	Monthly	G
Silver, Total Recoverable	µg/L	2, 3	*		*	67/22	Quarterly	Quarterly	C
Acute Whole Effluent Toxicity	TU _a	1, 9	*			Pass/Fail	Annually	Annually	C
Chronic Whole Effluent Toxicity	TU _c	1, 9	*			***	Once/permit cycle	Once/permit cycle	C
PARAMETER	Unit	Basis for Limits	Minimum		Maximum	Previous Permit Limit	Sampling Frequency	Reporting Frequency	Sample Type
pH	SU	1	6.0		9.0	6.5-9.0	Monthly	Monthly	G

* - Monitoring requirement only.

** - #/100mL; the Monthly Average for *E. coli* is a geometric mean.

*** - Parameter was not previously established in previous state operating permit.

**** - C = 24-hour composite

G = Grab

T = 24-hr. total

M = Measured/calculated

Basin for Limitations Codes:

- | | | |
|--|-----------------------------------|---|
| 1. State or Federal Regulation/Law | 5. Antidegradation Policy | 9. WET Test Policy |
| 2. Water Quality Standard (includes RPA) | 6. Water Quality Model | 10. Multiple Discharger Variance |
| 3. Water Quality Based Effluent Limits | 7. Best Professional Judgment | 11. Voluntary Early Nutrient Monitoring Program |
| 4. Antidegradation Review | 8. TMDL or Permit in lieu of TMDL | |

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Carbonaceous Biochemical Oxygen Demand (BOD₅)**. This facility's secondary treatment process was constructed with trickling filters and activated sludge in series. Since then, Anheuser-Busch has improved its pretreatment operations to reduce the strength of its discharge to the facility. Because of this, the wastewater loading is insufficient to sustain both processes in series and MSD has taken the activated sludge portion of the process off-line. Without the activated sludge process, this facility is a trickling filter with equivalent to secondary treatment. Effluent limits for CBOD₅ and TSS have been adjusted to reflect this change in the process. Concentration-based Effluent limitations have been established per 10 CSR 20-7.015(2), please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Effluent Limits Determination**. Effluent limits are also expressed in lbs/day. This facility receives less concentrated wastewater from the sewer system and qualifies to have the removal efficiency requirement removed in place of mass loading limitations for CBOD₅ per [40 CFR 133.103(d)].

Concentration (mg/L) * Flow that can be treated through secondary treatment (cfs) * Conversion Factor = Mass (lbs/day)

Monthly Average

40 mg/L * 387.5 cfs * 5.39 = **83,611 lbs/day**

- **Total Suspended Solids (TSS)**. This facility's secondary treatment process was constructed with trickling filters and activated sludge in series. Since then, Anheuser-Busch has improved its pretreatment operations to reduce the strength of its discharge to the facility. Because of this, the wastewater loading is insufficient to sustain both processes in series and MSD has taken the activated sludge portion of the process off-line. Without the activated sludge process, this facility is a trickling filter with equivalent to secondary treatment. Effluent limits for CBOD₅ and TSS have been adjusted to reflect this change in the process. Concentration-based Effluent limitations have been established per 10 CSR 20-7.015(2), please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Effluent Limits Determination**. Effluent limits are also expressed in lbs/day. This facility receives less concentrated wastewater from the sewer system and qualifies to have the removal efficiency requirement removed in place of mass loading limitations for TSS per [40 CFR 133.103(d)].

Concentration (mg/L) * Flow that can be treated through secondary treatment (cfs) * Conversion Factor = Mass (lbs/day)

Monthly Average

45 mg/L * 387.5 cfs * 5.39 = **94,063 lbs/day**

- **Escherichia coli (E. coli)**. Discharges to waters designated for secondary contact recreation shall be limited to 1,134 per 100 mL expressed as a weekly geometric mean during the recreational season (April 1 – October 31) per 10 CSR 20-7.015(9)(B)1.E. and 1,134 per 100mL as a monthly geometric mean per 10 CSR 20-7.031(5)(C).
- **Total Ammonia Nitrogen**. Monitoring only; statistical analysis conducted using the past five years of effluent data provided by the permittee indicates there is no reasonable potential for ammonia to cause or contribute to an instream excursion of water quality standards. Monitoring data will be used during the next renewal period to determine reasonable potential.
- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **Total Residual Chlorine (TRC).** Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

Chronic WLA: $C_e = ((232.5 + 14,830)10 - (14,830 * 0.0))/232.5$
 $C_e = 647.8 \text{ µg/L}$

Acute WLA: $C_e = ((232.5 + 1,483)19 - (1,483 * 0.0))/232.5$
 $C_e = 140.2 \text{ µg/L}$

$LTA_c = 647.8 (0.527) = 341.4 \text{ µg/L}$ [CV = 0.6, 99th Percentile]
 $LTA_a = 140.2 (0.321) = 45.0 \text{ µg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

MDL = 45.0 (3.11) = **140 µg/L** [CV = 0.6, 99th Percentile]
 AML = 45.0 (1.55) = **70 µg/L** [CV = 0.6, 95th Percentile, n = 4]

The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 140 µg/L (daily maximum limit) and 70 µg/L (monthly average limit). The monthly average limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values for a monthly average greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation.

- **Total Phosphorus and Total Nitrogen.** Monitoring required for facilities greater than 100,000 gpd design flow per 10 CSR 20-7.015(9)(D)7. Total Nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and Nitrate + Nitrite and reporting the sum of the results (reported as N). Nitrate + Nitrite can be analyzed together or separately.
- **Nitrate plus Nitrite as Nitrogen, and Total Kjeldahl Nitrogen.** This facility participates in the Voluntary Early Nutrient Monitoring Program and requested that these parameters be included as a requirement of their permit to simplify the reporting process.
- **pH.** 6.0-9.0 SU pH limitations [10 CSR 20-7.015] are protective of the water quality standard [10 CSR 20-7.031(5)(E)], due to the buffering capacity of the mixing zone.

Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the “Technical Support Document for Water Quality-based Toxic Controls” (EPA/505/2-90-001) and “The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 162 mg/L is used in the conversion below.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Silver	0.850	NA

- **Silver, Total Recoverable.** Monitoring only; statistical analysis conducted using the past five years of effluent data provided by the permittee indicates there is no reasonable potential for this parameter to cause or contribute to an instream excursion of water quality standards. Quarterly monitoring data will be used during the next renewal period to determine reasonable potential.

Whole Effluent Toxicity

- **Acute Whole Effluent Toxicity.** Monitoring requirement only. Monitoring is required to determine if reasonable potential exists for this facility's discharge to exceed water quality standards.

The acute Allowable Effluent Concentration (AEC) is determined as follows:

$$\text{Acute AEC\%} = (((232.5 + 1,483) / 232.5)^{-1})100 = 13.6\%$$

The resulting dilution series is: 56%, 28%, 14%, 7%, and 3.5%.

- **Chronic Whole Effluent Toxicity.** Monitoring requirement only. Monitoring is required to determine if reasonable potential exists for this facility's discharge to exceed water quality standards.

The chronic Allowable Effluent Concentration (AEC) is determined as follows:

$$\text{Chronic AEC\%} = (((232.5 + 14,830) / 232.5)^{-1})100 = 1.5\%$$

The resulting dilution series is: 37.5%, 7.5%, 1.5%, 0.3%, and 0.06%.

Parameters Removed

- **Arsenic, Cadmium, Chromium III, Chromium VI, Copper, Lead, Mercury, Nickel, Zinc, and Cyanide.** Statistical analysis conducted showed no reasonable potential for a water quality standard excursion for these parameters. As these parameters had a monitoring only requirement in the previous permit and not effluent limitations, a determination has been made to remove the monitoring requirement. These parameters will still be tested as a part of the expanded effluent testing requirement upon the next permit renewal.
- **Total Toxic Organics.** The annual monitoring requirement for total toxic organics has been removed as it has been determined that there is no reasonable potential for an excursion of the water quality standard. The expanded effluent testing requirement submitted with permit renewal will be used in the future to determine sampling requirements for toxics not previously established in the permit.

Sampling Frequency Justification:

The sampling and reporting frequency for all parameters has been reassessed and found appropriate; therefore, the frequencies have been retained from the previous permit. Monitoring for nutrient parameters has been set at monthly frequencies to coincide with the Program for Voluntary Early Nutrient Monitoring as requested by the permittee. Chronic WET testing shall be conducted no less than once per permit cycle for those facilities designated as majors.

Sampling Type Justification:

As per 10 CSR 20-7.015, CBOD₅, TSS, and WET test samples collected for mechanical plants shall be a 24 hour composite sample. Grab samples, however, must be collected for pH, *E. coli*, TRC, Oil & Grease, and nutrient parameters. This is due to the holding time restriction for *E. coli*, the volatility TRC, and the fact that pH cannot be preserved and must be sampled in the field. As Oil & Grease and nutrient samples must be immediately preserved, these samples are to be collected as a grab. Ammonia and Silver must also be immediately preserved but may be collected as composite as the permittee has an equipment setup to handle composite collections with immediate preservation.

OUTFALLS #002, #003, AND #004 – STORMWATER OUTFALLS

Parameters Removed

The previous permit established monitoring requirements and/or limits for flow, BOD₅, TSS, pH, Oil & Grease, and Settleable Solids in Outfalls #002, #003, and #004. These parameters have all been removed from the permit and replaced with a requirement to develop and implement a Stormwater Pollution Prevention Plan (SWPPP). A review of the past five years of stormwater sampling data submitted by the permittee shows several exceedances of TSS and BOD₅; however, the exceedances are from effluent limits that are not appropriate for stormwater discharges. Additionally, the Department believes the requirements of developing and implementing a SWPPP will still be protective of water quality.

OUTFALLS #001, #002, #003, AND #004 – GENERAL CRITERIA CONSIDERATIONS:

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into the permit for those pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states that pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion. In order to comply with this regulation, the permit writer will complete reasonable potential determinations on whether the discharge will violate any of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches that of the rule itself, under 10 CSR 20-7.031(4)). It should also be noted that Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit states that it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri that is in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule or regulation promulgated by the commission.

- (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses. The discharge from this outfall is made up of treated domestic wastewater. No evidence of an excursion of this criterion has been observed by the department in the past and the facility has not disclosed any other information related to the characteristics of the discharge on their permit application which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, this facility utilizes equivalent to secondary treatment technology and is currently in compliance with the equivalent to secondary treatment technology based effluent limits established in this permit and there has been no indication to the department that the stream has had issues maintaining beneficial uses as a result of this discharge. Based on the information reviewed during the drafting of this permit, these final effluent limitations appear to have protected against the excursion of this criterion in the past. Therefore, the discharge does not have the reasonable potential to cause or contribute to an excursion of this criterion.
- (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses. Please see (A) above as justification is the same.
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses. Please see (A) above as justification is the same.
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life. This permit contains final effluent limitations which are protective of both acute and chronic toxicity for various pollutants that are either expected to be discharged by domestic wastewater facilities or that were disclosed by this facility on the application for permit coverage. Based on the information reviewed during the drafting of this permit, it has been determined if the facility meets final effluent limitations established in this permit, there is no reasonable potential for the discharge to cause an excursion of this criterion.
- (E) There shall be no significant human health hazard from incidental contact with the water. Please see (D) above as justification is the same.
- (F) There shall be no acute toxicity to livestock or wildlife watering. Please see (D) above as justification is the same.
- (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community. Please see (A) above as justification is the same.
- (H) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247. The discharge from this facility is made up of treated domestic wastewater. No evidence of an excursion of this criterion has been observed by the department in the past and the facility has not disclosed any other information related to the characteristics of the discharge on their permit application which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, any solid wastes received or produced at this facility are wholly contained in appropriate storage facilities, are not discharged, and are disposed of offsite. This discharge is subject to Standard Conditions Part III, which contains requirements for the management and disposal of sludge to prevent its discharge. Therefore, this discharge does not have reasonable potential to cause or contribute to an excursion of this criterion.

Part VII – Cost Analysis for Compliance

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

☒ - The permittee has waived the Cost Analysis for Compliance.

Part VIII – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together and all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. The permits issued to the Metropolitan St. Louis Sewer District (MSD) will all be issued for a period of five years which does not follow this synchronization policy. The approach to synchronize MSD's permits together instead of by watershed is appropriate as it will allow for MSD to assess permit requirements more effectively.

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing. The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

☒ - The Public Notice period for this operating permit was from November 3, 2017 – December 4, 2017. Responses to the Public Notice of this operating permit did not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: APRIL 19, 2017

COMPLETED BY:

**ANGELA FALLS, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-1419
angela.falls@dnr.mo.gov**

Appendices

APPENDIX - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	10
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	10
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	0
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	-
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	-
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	-
PRELIMINARY TREATMENT – Headworks		
Screening and/or comminution	3	3
Grit removal	3	3
Plant pumping of main flow (lift station at the headworks)	3	3
PRIMARY TREATMENT		
Primary clarifiers	5	5
Combined sedimentation/digestion	5	-
Chemical addition (except chlorine, enzymes)	4	-
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	-
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	-
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	-
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	10
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	-
Land Disposal – low rate	3	-
High rate	5	-
Overland flow	4	-
Total from page ONE (1)	----	44

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	-
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	2
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	-
Raw wastes subject to toxic waste discharge	6	-
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	10
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	-
Stabilization ponds without aeration	5	-
Aerated lagoon	8	-
Advanced Waste Treatment Polishing Pond	2	-
Chemical/physical – without secondary	15	-
Chemical/physical – following secondary	10	-
Biological or chemical/biological	12	-
Carbon regeneration	4	-
DISINFECTION		
Chlorination or comparable	5	5
Dechlorination	2	2
On-site generation of disinfectant (except UV light)	5	-
UV light	4	-
SOLIDS HANDLING – SLUDGE		
Solids Handling Thickening	5	5
Anaerobic digestion	10	-
Aerobic digestion	6	-
Evaporative sludge drying	2	-
Mechanical dewatering	8	8
Solids reduction (incineration, wet oxidation)	12	12
Land application	6	-
Total from page TWO (2)	----	44
Total from page ONE (1)	---	44
Grand Total	---	88

- ☒ - A: 71 points and greater
☐ - B: 51 points – 70 points
☐ - C: 26 points – 50 points
☐ - D: 0 points – 25 points

APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	2.90	1.5	0.37	30.00	11.8/2	0.58	1.97	NO
Total Ammonia as Nitrogen (Winter) mg/L	12.1	3.60	3.1	0.46	29.00	15.1/2	0.54	1.91	NO
Arsenic, Total Recoverable	NA	NA	20.0	0.13	20.00	6.7/2	0.3	1.22	NO
Cadmium, Total Recoverable	8.2	2.15	0.4	0.25	20.00	5.4/0.15	1.0	2.94	NO
Chromium III, Total Recoverable	2676.9	2.38	128.0	0.27	20.00	10/2	0.4	1.75	NO
Chromium VI, Dissolved	<i>All reported results were non-detects</i>								NO
Copper, Total Recoverable	22.0	11.44	14.1	1.30	20.00	35/5.6	0.6	2.41	NO
Lead, Total Recoverable	150.8	6.67	5.9	0.76	20.00	20/0.8	0.7	2.46	NO
Mercury, Total Recoverable	2.8	0.92	0.5	0.10	20.00	6.6/0.05	2.5	1.03	NO
Nickel, Total Recoverable	706.1	8.68	78.5	0.99	20.00	40/8	0.3	1.60	NO
Silver, Total Recoverable	8.7	1.55	NA	NA	20.00	6/0.03	0.4	1.91	NO
Zinc, Total Recoverable	180.7	21.50	179.2	2.45	20.00	86/10	0.4	1.84	NO
Cyanide	22.0	8.98	5.0	1.02	20.00	34/4	0.5	1.95	NO

N/A – Not Applicable

* - Units are (µg/L) unless otherwise noted.

** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.

*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.

RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

n – Is the number of samples.

MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

APPENDIX – FACILITY LAYOUT:

Influent lift station / two (2) coarse mechanical bar screens / six (6) grit detritors / seven (7) comminutors / four (4) 2-pass tanks with coarse bubble diffusers / eight (8) primary clarifiers / six (6) trickling filters / six (6) aeration tanks *not in service* / twelve (12) final clarifiers / chlorination / dechlorination / thirteen (13) sludge belt filter presses / four (4) multiple-hearth incinerators / two (2) ash slurry basins / ash is landfilled / blending occurs when flow is diverted from the primary clarifiers and is combined with effluent prior to discharge – the diverted flow is chlorinated before it combines with effluent.





STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
 - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
 4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
 5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
 6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
 7. **Discharge Monitoring Reports.**
 - a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.
- b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



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10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



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PART II - SPECIAL CONDITIONS – PUBLICLY OWNED
TREATMENT WORKS
SECTION A – INDUSTRIAL USERS

1. Definitions

Definitions as set forth in the Missouri Clean Water Laws and approved by the Missouri Clean Water Commission shall apply to terms used herein.

Significant Industrial User (SIU). Except as provided in the *General Pretreatment Regulation* 10 CSR 20-6.100, the term Significant Industrial User means:

1. All Industrial Users subject to Categorical Pretreatment Standards; and
2. Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's or for violating any Pretreatment Standard or requirement.

Clean Water Act (CWA) is the the federal Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (2002).

2. Identification of Industrial Discharges

Pursuant to 40 CFR 122.44(j)(1), all POTWs shall identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR 403.

3. Application Information

Applications for renewal or modification of this permit must contain the information about industrial discharges to the POTW pursuant to 40 CFR 122.21(j)(6)

4. Notice to the Department

Pursuant to 40 CFR 122.42(b), all POTWs must provide adequate notice of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging these pollutants; and
2. Any substantial change into the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on:
 - i. the quality and quantity of effluent introduced into the POTW, and
 - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

For POTWs without an approved pretreatment program, the notice of industrial discharges which was not included in the permit application shall be made as soon as practicable. For POTWs with an approved pretreatment program, notice is to be included in the annual pretreatment report required in the special conditions of this permit. Notice may be sent to:

Missouri Department of Natural Resources
Water Protection Program
Attn: Pretreatment Coordinator
P.O. Box 176
Jefferson City, MO 65102

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
March 1, 2015

**PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND INDUSTRIAL WASTEWATER
TREATMENT FACILITIES**

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
 - a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
 - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.

Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:

 - a. A site specific permit must be obtained for each operating location, including application sites.
 - b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
 - a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and sludge conditions of this permit.
2. The permittee shall operate the facility so that there is no sludge discharged to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored, and ash used or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
 - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
 - b. Permittee shall close the lagoon in accordance with Section H.

SECTION G – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
 - a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
 - b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.

 - a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
 - b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.
6. Agricultural and Silvicultural Sites:

Septage – Based on Water Quality guide 422 (WQ422) published by the University of Missouri

 - a. Haulers that land apply septage must obtain a state permit
 - b. Do not apply more than 30,000 gallons of septage per acre per year.
 - c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
 - d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
 - e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

- a. Biosolids shall be monitored to determine the quality for regulated pollutants
- b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.
- c. Table 1 gives the maximum concentration allowable to protect water quality standards

TABLE 1

Biosolids ceiling concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

¹ Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

- d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

TABLE 2

Biosolids Low Metal Concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

¹ You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

- e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

TABLE 3

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total ¹	Annual	Total ¹	Annual	Total ¹
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

¹ Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances ¹

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000 ²
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil) ³
Other	⁴

¹ Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

² This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

³ Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

⁴ Case by case review. Concentrations in sludge should not exceed the 95th percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

- a. Use best management practices when applying biosolids.
- b. Biosolids cannot discharge from the land application site
- c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
- d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
- e. Do not apply more than the agronomic rate of nitrogen needed.
- f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.
 - i. PAN can be determined as follows and is in accordance with WQ426
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application.
- g. Buffer zones are as follows:
 - i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
 - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
 - iii. 150 feet if dwellings;
 - iv. 100 feet of wetlands or permanent flowing streams;
 - v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
- h. Slope limitation for application sites are as follows;
 - i. A slope 0 to 6 percent has no rate limitation
 - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
 - iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
- i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
- k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
 - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
 - i. PAN can be determined as follows:
$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1).$$
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
 - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
 - b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
 - c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

SECTION I – MONITORING FREQUENCY

- At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1, 2, and 3)			
	Metals, Pathogens and Vectors	Nitrogen TKN ¹	Nitrogen PAN ²	Priority Pollutants and TCLP ³
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	-- ⁴
10,001 +	1 per week	1 per week	1 per day	-- ⁴

¹ Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less.

² Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.

³ Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.

⁴ One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids.

This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

Note 3: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

- If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.
- Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
- At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

- The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
- Reporting period
 - By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
 - Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
- Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.
- Reports shall be submitted as follows:

Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit
(see cover letter of permit)
ATTN: Sludge Coordinator

EPA Region VII
Water Compliance Branch (WACM)
Sludge Coordinator
11201 Renner Blvd.
Lenexa, KS 66219

5. Annual report contents. The annual report shall include the following:
- a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
 - b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
 - c. Gallons and % solids data used to calculate the dry ton amounts.
 - d. Description of any unusual operating conditions.
 - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
 - i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
 - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
 - f. Contract Hauler Activities:

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
 - g. Land Application Sites:
 - i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
 - ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
 - iii. Report the method used for compliance with pathogen and vector attraction requirements.
 - iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
**FORM B2 – APPLICATION FOR AN OPERATING PERMIT FOR
FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND
HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY**

FOR AGENCY USE ONLY

CHECK NUMBER

DATE RECEIVED

FEE SUBMITTED

7/13/16

0.50

PART A – BASIC APPLICATION INFORMATION

1. THIS APPLICATION IS FOR:

- ☐ An operating permit for a new or unpermitted facility. Construction Permit # _____
(Include completed Antidegradation Review or request to conduct an Antidegradation Review, see instructions)
☒ An operating permit renewal: Permit #MO- 0025178 Expiration Date 01/08/2017
☐ An operating permit modification: Permit #MO- _____ Reason: _____

1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)? ☐ YES ☒ NO

2. FACILITY See Attachments 2.4a & 2.4b for SW outfall map and descriptions.

NAME
MSD - Bissell Point WWTP

TELEPHONE NUMBER WITH AREA CODE
314-436-8749

ADDRESS (PHYSICAL)
10 East Grand Avenue

CITY
St. Louis

STATE
MO

ZIP CODE
63147

2.1 LEGAL DESCRIPTION (Facility Site): ¼, SE ¼, SE ¼, Sec. 35, T 46N, R 7E

COUNTY
St. Louis City

2.2 UTM Coordinates Easting (X): 744360 Northing (Y): 4284602
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.3 Name of receiving stream: Mississippi River (P)

2.4 Number of Outfalls: 1 wastewater outfalls, 5 stormwater outfalls, 0 instream monitoring sites

3. OWNER

NAME
Metropolitan St. Louis Sewer District

EMAIL ADDRESS
blhoel@stlmsd.com

TELEPHONE NUMBER WITH AREA CODE
314-768-6200

ADDRESS
2350 Market Street

CITY
St. Louis

STATE
MO

ZIP CODE
63103

3.1 Request review of draft permit prior to Public Notice? ☒ YES ☐ NO

3.2 Are you a Publically Owned Treatment Works (POTW)? ☒ YES ☐ NO
If yes, is the Financial Questionnaire attached? ☒ YES ☐ NO

See Attachment 3.2

3.3 Are you a Privately Owned Treatment Facility? ☐ YES ☒ NO

3.4 Are you a Privately Owned Treatment Facility regulated by the Public Service Commission (PSC)? ☐ YES ☒ NO

4. CONTINUING AUTHORITY: Permanent organization which will serve as the continuing authority for the operation, maintenance and modernization of the facility.

NAME
Metropolitan St. Louis Sewer District

EMAIL ADDRESS
blhoel@stlmsd.com

TELEPHONE NUMBER WITH AREA CODE
314-768-6200

ADDRESS
2350 Market Street

CITY
St. Louis

STATE
MO

ZIP CODE
63103

If the Continuing Authority is different than the Owner, include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

5. OPERATOR

NAME
See Attachment 5

TITLE

CERTIFICATE NUMBER (IF APPLICABLE)

EMAIL ADDRESS

TELEPHONE NUMBER WITH AREA CODE

6. FACILITY CONTACT

NAME
Rebecca Coyle

TITLE
Operations Division Manager

EMAIL ADDRESS
rjcoyle@stlmsd.com

TELEPHONE NUMBER WITH AREA CODE
314-436-8749

ADDRESS
10 East Grand Avenue

CITY
St. Louis

STATE
MO

ZIP CODE
63147



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH

Water Protection Program

**FORM B2 – APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE
PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS
PER DAY**

FACILITY NAME
MSD - Bissell Point Wastewater Treatment Plant

PERMIT NO.
MO-0025178

COUNTY
St. Louis City

APPLICATION OVERVIEW

Form B2 has been developed in a modular format and consists of Parts A, B and C and a Supplemental Application Information (Parts D, E, F and G) packet. All applicants must complete Parts A, B and C. Some applicants must also complete parts of the Supplemental Application Information packet. The following items explain which parts of Form B2 you must complete. Submittal of an incomplete application may result in the application being returned.

BASIC APPLICATION INFORMATION

- A. Basic Application Information for all Applicants. All applicants must complete Part A.
- B. Additional Application Information for all Applicants. All applicants must complete Part B.
- C. Certification. All applicants must complete Part C.

SUPPLEMENTAL APPLICATION INFORMATION

- D. Expanded Effluent Testing Data. A treatment works that discharges effluent to surface water of the United States and meets one or more of the following criteria must complete *Part D - Expanded Effluent Testing Data*:
 - 1. Has a design flow rate greater than or equal to 1 million gallons per day.
 - 2. Is required to have or currently has a pretreatment program.
 - 3. Is otherwise required by the permitting authority to provide the information.
- E. Toxicity Testing Data. A treatment works that meets one or more of the following criteria must complete *Part E - Toxicity Testing Data*:
 - 1. Has a design flow rate greater than or equal to 1 million gallons per day.
 - 2. Is required to have or currently has a pretreatment program.
 - 3. Is otherwise required by the permitting authority to provide the information.
- F. Industrial User Discharges and Resource Conservation and Recovery Act / Comprehensive Environmental Response, Compensation and Liability Act Wastes. A treatment works that accepts process wastewater from any significant industrial users, also known as SIUs, or receives a Resource Conservation and Recovery Act or CERCLA wastes must complete *Part F - Industrial User Discharges and Resource Conservation and Recovery Act / CERCLA Wastes*.
SIUs are defined as:
 - 1. All Categorical Industrial Users, or CIUs, subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations 403.6 and 40 Code of Federal Regulations 403.6 and 40 CFR Chapter 1, Subchapter N.
 - 2. Any other industrial user that meets one or more of the following:
 - i. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions).
 - ii. Contributes a process waste stream that makes up five percent or more of the average dry weather hydraulic or organic capacity of the treatment plant.
 - iii. Is designated as an SIU by the control authority.
 - iv. Is otherwise required by the permitting authority to provide the information.
- G. Combined Sewer Systems. A treatment works that has a combined sewer system must complete *Part G - Combined Sewer Systems*.

ALL APPLICANTS MUST COMPLETE PARTS A, B and C



**Metropolitan St. Louis
Sewer District**

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

RECEIVED

JUL 13 2016

Water Protection Program

July 11, 2016

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Water Protection Program
ATTN: NPDES Permits and Engineering Section
P.O. Box 176
Jefferson, City MO 65102

**RE: MSD – Bissell Point WWTP Operating Permit Renewal Application
NPDES Operating Permit Number: MO-0025178**

Dear Program Administrator:

Enclosed is the application to renew the operating permit for the MSD's Bissell Point WWTP.
Please contact me at (314) 436-8749 if you have any questions or need additional information.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Rebecca Coyle
Operations Division Manager – Bissell Point WWTP

Enclosures

cc: Jonathon Sprague – MSD Director of Operations
John Lodderhose – MSD Environmental Compliance
Cindy Kretzer – MSD Environmental Compliance

RECEIVED

JUL 18 2011

Water Protection Program

DATE: 11/13/11

TIME: 10:00 AM

BY: [Signature]

FOR: [Signature]

RE: [Signature]



MEMORANDUM FOR THE RECORD
SUBJECT: [Illegible]

1. [Illegible paragraph of text]

2. [Illegible paragraph of text]

3. [Illegible paragraph of text]

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
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PART A – BASIC APPLICATION INFORMATION

7. FACILITY INFORMATION

7.1 Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. – Chlorination and Dechlorination), influents, and outfalls. Specify where samples are taken. Indicate any treatment process changes in the routing of wastewater during dry weather and peak wet weather. Include a brief narrative description of the diagram.
Attach sheets as necessary.

See Attachments 7.1a, 7.1b, and 7.1c.

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
PART A - BASIC APPLICATION INFORMATION		
7. FACILITY INFORMATION (continued)		
<p>7.2 Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information.</p> <ul style="list-style-type: none"> a. The area surrounding the treatment plant, including all unit processes. b. The location of the downstream landowner(s). (See Item 10.) c. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable. d. The actual point of discharge. e. Wells, springs, other surface water bodies and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant. f. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed. g. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, or disposed. <div style="text-align: right; border: 1px solid black; padding: 2px; display: inline-block;">See Attachment 7.2.</div>		
7.3 Facility SIC Code: 4952	Discharge SIC Code: 4952	
7.4 Number of people presently connected or population equivalent (P.E.): _____	Design P.E. 1,500,000	
<p>7.5 Connections to the facility: Approx. 70,900 Total Connections</p> <p>Number of units presently connected:</p> <p>Homes _____ Trailers _____ Apartments _____ Other (including industrial) _____</p> <p>Number of Commercial Establishments: _____</p>		
7.6 Design Flow 150 MGD	Actual Flow 120 MGD (Average Flow 1/9/12 - 4/30/16)	
<p>7.7 Will discharge be continuous through the year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Discharge will occur during the following months: _____ How many days of the week will discharge occur? _____</p> <p style="text-align: right;">January - December; 7 days/week</p>		
<p>7.8 Is industrial wastewater discharged to the facility? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>If yes, describe the number and types of industries that discharge to your facility. Attach sheets as necessary</p> <p>See completed Part F.</p> <p>Refer to the APPLICATION OVERVIEW to determine whether additional information is needed for Part F.</p>		
<p>7.9 Does the facility accept or process leachate from landfills? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>		
<p>7.10 Is wastewater land applied? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>If yes, is Form I attached? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		
<p>7.11 Does the facility discharge to a losing stream or sinkhole? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		
<p>7.12 Has a wasteload allocation study been completed for this facility? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		
8. LABORATORY CONTROL INFORMATION		
LABORATORY WORK CONDUCTED BY PLANT PERSONNEL		
Lab work conducted outside of plant.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Push-button or visual methods for simple test such as pH, settleable solids.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Additional procedures such as Dissolved Oxygen, Chemical Oxygen Demand, Biological Oxygen Demand, titrations, solids, volatile content.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

FACILITY NAME MSD - Bissell Point WWTP		PERMIT NO. MO- 0025178		OUTFALL NO. 001	
PART A - BASIC APPLICATION INFORMATION					
9. SLUDGE HANDLING, USE AND DISPOSAL					
9.1 Is the sludge a hazardous waste as defined by 10 CSR 25? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
9.2 Sludge production (Including sludge received from others): Design Dry Tons/Year 74,369 Actual Dry Tons/Year 47,528 (2015)					
9.3 Sludge storage provided: _____ Cubic feet; _____ Days of storage; _____ Average percent solids of sludge; <input checked="" type="checkbox"/> No sludge storage is provided. <input type="checkbox"/> Sludge is stored in lagoon. <div style="border: 1px solid black; padding: 2px; display: inline-block;">See Attachment 9</div>					
9.4 Type of storage: <input type="checkbox"/> Holding Tank <input type="checkbox"/> Building <input type="checkbox"/> Basin <input type="checkbox"/> Lagoon <input type="checkbox"/> Concrete Pad <input checked="" type="checkbox"/> Other (Describe) <div style="border: 1px solid black; padding: 2px; display: inline-block;">See Attachment 9</div>					
9.5 Sludge Treatment: <div style="border: 1px solid black; padding: 2px; display: inline-block;">See Attachment 9</div> <input type="checkbox"/> Anaerobic Digester <input type="checkbox"/> Storage Tank <input type="checkbox"/> Lime Stabilization <input type="checkbox"/> Lagoon <input type="checkbox"/> Aerobic Digester <input type="checkbox"/> Air or Heat Drying <input type="checkbox"/> Composting <input checked="" type="checkbox"/> Other (Attach Description)					
9.6 Sludge use or disposal: <input type="checkbox"/> Land Application <input type="checkbox"/> Contract Hauler <input type="checkbox"/> Hauled to Another Treatment Facility <input type="checkbox"/> Solid Waste Landfill <input type="checkbox"/> Surface Disposal (Sludge Disposal Lagoon, Sludge Held For More Than Two Years) <input checked="" type="checkbox"/> Incineration <input type="checkbox"/> Other (Attach Explanation Sheet) _____					
9.7 Person responsible for hauling sludge to disposal facility: <input checked="" type="checkbox"/> By Applicant <input type="checkbox"/> By Others (complete below)					
NAME			EMAIL ADDRESS		
ADDRESS		CITY		STATE	ZIP CODE
CONTACT PERSON		TELEPHONE NUMBER WITH AREA CODE		PERMIT NO. MO-	
9.8 Sludge use or disposal facility: <input checked="" type="checkbox"/> By Applicant <input type="checkbox"/> By Others (Complete below)					
NAME			EMAIL ADDRESS		
ADDRESS		CITY		STATE	ZIP CODE
CONTACT PERSON		TELEPHONE NUMBER WITH AREA CODE		PERMIT NO. MO-	
9.9 Does the sludge or biosolids disposal comply with Federal Sludge Regulation 40 CFR 503? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain)					
END OF PART A					

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
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PART B – ADDITIONAL APPLICATION INFORMATION

10. COLLECTION SYSTEM

10.1 Length of sanitary sewer collection system in miles
1,544 miles total (Combined: 562.6 mi.; Sanitary: 981.7 mi.)

10.2 Does significant infiltration occur in the collection system? ☐ Yes ☒ No
 If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:

11. BYPASSING

Does any bypassing occur anywhere in the collection system or at the treatment facility? Yes ☒ No ☐
 If yes, explain:
There are periodic sewer overflows in the collection system and blending at the treatment plant.

12. OPERATION AND MAINTENANCE PERFORMED BY CONTRACTOR(S)

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of the contractor?
 Yes ☐ No ☒
 If Yes, list the name, address, telephone number and status of each contractor and describe the contractor's responsibilities.
 (Attach additional pages if necessary.)

NAME	
MAILING ADDRESS	
TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
RESPONSIBILITIES OF CONTRACTOR	

13. SCHEDULED IMPROVEMENTS AND SCHEDULES OF IMPLEMENTATION

Provide information about any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses for each.

 None.

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
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PART B – ADDITIONAL APPLICATION INFORMATION
14. EFFLUENT TESTING DATA

Applicants must provide effluent testing data for the following parameters. Provide the indicated effluent data **for each outfall through which effluent is discharged**. Do not include information of combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least **three samples** and must be no more than four and one-half years apart.

Outfall Number

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.6	S.U.	7.2	S.U.	1,574
pH (Maximum)	8.1	S.U.		S.U.	
Flow Rate	348.2	MGD	118.7	MGD	1,574

*For pH report a minimum and a maximum daily value


POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	REPORTING LIMIT
	Conc.	Units	Conc.	Units	Number of Samples		

Conventional and Nonconventional Compounds

BIOCHEMICAL OXYGEN DEMAND (Report One)	BOD ₅		mg/L		mg/L			
	CBOD ₅	60	mg/L	11	mg/L	1,125	Std. Methods 5210B	2 mg/L
E. COLI **	>24,196	#/100 mL	40	#/100 mL	69	Std. Methods 9223		<10
TOTAL SUSPENDED SOLIDS (TSS)	99	mg/L	18	mg/L	1,338	Std. Methods 2540D		2 mg/L
AMMONIA (as N)	15.1	mg/L	6.1	mg/L	114	Std. Methods 4500C		2 mg/L
CHLORINE* (TOTAL RESIDUAL, TRC)	0.130	mg/L	0.024	mg/L	337	Std. Methods 4500-H + B		0.13 mg/L
DISSOLVED OXYGEN		mg/L		mg/L				
OIL and GREASE	13	mg/L	3	mg/L	51	EPA1664A		4 mg/L
OTHER		mg/L		mg/L				

*Report only if facility chlorinates **E. coli average calculated as a geomean

END OF PART B

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001, 002, 003, 004, 005, 006
PART C - CERTIFICATION		
15. CERTIFICATION		
<p>All applicants must complete the Certification Section. This certification must be signed by an officer of the company or city official. All applicants must complete all applicable sections as explained in the Application Overview. By signing this certification statement, applicants confirm that they have reviewed the entire form and have completed all sections that apply to the facility for which this application is submitted.</p>		
ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.		
<p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p>		
PRINTED NAME Rebecca Coyle	OFFICIAL TITLE (MUST BE AN OFFICER OF THE COMPANY OR CITY OFFICIAL) Operations Division Manager	
SIGNATURE 		
TELEPHONE NUMBER WITH AREA CODE 314-436-8749		
DATE SIGNED 7-11-16		
<p>Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.</p>		
<p>Send Completed Form to:</p> <p style="text-align: center;">Department of Natural Resources Water Protection Program ATTN: NPDES Permits and Engineering Section P.O. Box 176 Jefferson City, MO 65102</p>		
END OF PART C		
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH PARTS OF FORM B2 YOU MUST COMPLETE.		
<p>Do not complete the remainder of this application, unless at least one of the following statements applies to your facility:</p> <ol style="list-style-type: none"> 1. Your facility design flow is equal to or greater than 1,000,000 gallons per day. 2. Your facility is a pretreatment treatment works. 3. Your facility is a combined sewer system. 		
<p>Submittal of an incomplete application may result in the application being returned. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.</p>		

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL											
FACILITY NAME MSD - Bissell Point WWTP				PERMIT NO. MO- 0025178				OUTFALL NO. 001			
PART D – EXPANDED EFFLUENT TESTING DATA											
16. EXPANDED EFFLUENT TESTING DATA											
Refer to the APPLICATION OVERVIEW to determine whether Part D applies to the treatment works.											
<p>If the treatment works has a design flow greater than or equal to 1 million gallons per day or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information for each outfall through which effluent is discharged. Do not include information of combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years apart.</p>											
Outfall Number (Complete Once for Each Outfall Discharging Effluent to Waters of the State.)											
POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	No. of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS AND HARDNESS											
ALUMINUM											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM III											
CHROMIUM VI											
COPPER											
IRON											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (as CaCO ₃)											
VOLATILE ORGANIC COMPOUNDS											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											

FACILITY NAME		MSD - Bissell Point WWTP				PERMIT NO.		MO- 0025178		OUTFALL NO.		001	
PART D – EXPANDED EFFLUENT TESTING DATA													
16. EXPANDED EFFLUENT TESTING DATA													
Complete Once for Each Outfall Discharging Effluent to Waters of the State													
POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL		
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	No. of Samples				
CHLOROBENZENE													
CHLORODIBROMO-METHANE													
CHLOROETHANE													
2-CHLORO-ETHYL VINYL ETHER													
CHLOROFORM													
DICHLOROBROMO-METHANE													
1,1-DICHLORO-ETHANE													
1,2-DICHLORO-ETHANE													
TRANS-1,2-DICHLOROETHYLENE													
1,1-DICHLORO-ETHYLENE													
1,2-DICHLORO-PROPANE													
1,3-DICHLORO-PROPYLENE													
ETHYLBENZENE													
METHYL BROMIDE													
METHYL CHLORIDE													
METHYLENE CHLORIDE													
1,1,2,2-TETRA-CHLOROETHANE													
TETRACHLORO-ETHANE													
TOLUENE													
1,1,1-TRICHLORO-ETHANE													
1,1,2-TRICHLORO-ETHANE													
TRICHLORETHYLENE													
VINYL CHLORIDE													
ACID-EXTRACTABLE COMPOUNDS													
P-CHLORO-M-CRESOL													
2-CHLOROPHENOL													
2,4-DICHLOROPHENOL													
2,4-DIMETHYLPHENOL													
4,6-DINITRO-O-CRESOL													
2,4-DINITROPHENOL													
2-NITROPHENOL													
4-NITROPHENOL													

FACILITY NAME	MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
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PART D – EXPANDED EFFLUENT TESTING DATA
16. EXPANDED EFFLUENT TESTING DATA

Complete Once for Each Outfall Discharging Effluent to Waters of the State.

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	No. of Samples		
PENTACHLOROPHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											

See Attachment 16b
BASE-NEUTRAL COMPOUNDS

ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)ANTHRACENE											
BENZO(A)PYRENE											
3,4-BENZO- FLUORANTHENE											
BENZO(GH) PHERYLENE											
BENZO(K) FLUORANTHENE											
BIS (2-CHLOROTHOXY) METHANE											
BIS (2-CHLOROETHYL) – ETHER											
BIS (2-CHLOROISO- PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORONAPH- THALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO (A,H) ANTHRACENE											
1,2-DICHLORO-BENZENE											
1,3-DICHLORO-BENZENE											
1,4-DICHLORO-BENZENE											
3,3-DICHLORO- BENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
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PART E - TOXICITY TESTING DATA
17. TOXICITY TESTING DATA

Refer to the APPLICATION OVERVIEW to determine whether Part E applies to the treatment works.

Publicly owned treatment works, or POTWs, meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points.

- A. POTWs with a design flow rate greater than or equal to 1 million gallons per day
- B. POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403)
- C. POTWs required by the permitting authority to submit data for these parameters
 - At a minimum, these results must include quarterly testing for a 12-month period within the past one year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute or chronic toxicity, depending on the range of receiving water dilution. Do not include information about combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
 - If EPA methods were not used, report the reason for using alternative methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E. If no biomonitoring data is required, do not complete Part E. Refer to the application overview for directions on which other sections of the form to complete.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years: 0 chronic 5 acute

Complete the following chart for the last three whole effluent toxicity tests. Allow one column per test. Copy this page if more than three tests are being reported.

	Most Recent	2 ND Most Recent	3 RD Most Recent
A. Test Information			
Test Method Number	Cerio. dubia/Pim. promelas	Cerio. dubia/Pim. promelas	Cerio. dubia/Pim. promelas
Final Report Number	1911502	1805311	1616510
Outfall Number	001	001	001
Dates Sample Collected	01/11/2016 - 01/12/2016	01/05/2015 - 01/06/2015	01/06/2014 - 01/07/2014
Date Test Started	01/13/2016	01/07/2015	01/08/2014
Duration	48 hours	48 hours	48 hours
B. Toxicity Test Methods Followed			
Manual Title	USEPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Ed., EPA-821-R-02-012		
Edition Number and Year of Publication			
Page Number(s)			
C. Sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used			
24-Hour Composite	X	X	X
Grab			
D. Indicate where the sample was taken in relation to disinfection (Check all that apply for each)			
Before Disinfection	X	X	X
After Disinfection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Dechlorination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Describe the point in the treatment process at which the sample was collected			
Sample Was Collected:	Effluent Discharge	Effluent Discharge	Effluent Discharge
F. Indicate whether the test was intended to assess chronic toxicity, acute toxicity, or both			
Chronic Toxicity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acute Toxicity	X	X	X
G. Provide the type of test performed			
Static	X	X	X
Static-renewal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flow-through	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Source of dilution water. If laboratory water, specify type; if receiving water, specify source			
Laboratory Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receiving Water	X Mississippi River	X Mississippi River	X Mississippi River

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
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PART E - TOXICITY TESTING DATA
17. TOXICITY TESTING DATA (continued)

	Most Recent	Second Most Recent	Third Most Recent
I. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.			
Fresh Water	X	X	X
Salt Water			

J. Percentage of effluent used for all concentrations in the test series			
	AEC = 15%	AEC = 15.1%	AEC = 15.1%

K. Parameters measured during the test (State whether parameter meets test method specifications)			
pH	Meets test specifications	Meets test specifications	Meets test specifications
Salinity	Meets test specifications	Meets test specifications	Meets test specifications
Temperature	Meets test specifications	Meets test specifications	Meets test specifications
Ammonia	Meets test specifications	Meets test specifications	Meets test specifications
Dissolved Oxygen	Meets test specifications	Meets test specifications	Meets test specifications

L. Test Results			
Acute:			
Percent Survival in 100% Effluent			
LC ₅₀	>60% Effluent, both species	>60.4% Effluent, both species	>60.4% Effluent, both species
95% C.I.			
Control Percent Survival			
Other (Describe)			

Chronic: N/A			
NOEC			
IC ₂₅			
Control Percent Survival			
Other (Describe)			

M. Quality Control/ Quality Assurance			
Is reference toxicant data available?	Yes	Yes	Yes
Was reference toxicant test within acceptable bounds?	Yes	Yes	Yes
What date was reference toxicant test run (MM/DD/YYYY)?	01/06/2016	01/07/2015	01/08/2014
Other (Describe)			

Is the treatment works involved in a toxicity reduction evaluation? ☐ Yes ☒ No

If yes, describe:

If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date Submitted (MM/DD/YYYY)

Summary of Results (See Instructions)

END OF PART E

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL

FACILITY NAME

MSD - Bissell Point WWTP

PERMIT NO.

MO- 0025178

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001

PART E - TOXICITY TESTING DATA
17. TOXICITY TESTING DATA

Refer to the APPLICATION OVERVIEW to determine whether Part E applies to the treatment works.

Publicly owned treatment works, or POTWs, meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points.

- A. POTWs with a design flow rate greater than or equal to 1 million gallons per day
- B. POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403)
- C. POTWs required by the permitting authority to submit data for these parameters
 - At a minimum, these results must include quarterly testing for a 12-month period within the past one year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute or chronic toxicity, depending on the range of receiving water dilution. Do not include information about combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
 - If EPA methods were not used, report the reason for using alternative methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E. If no biomonitoring data is required, do not complete Part E. Refer to the application overview for directions on which other sections of the form to complete.

 Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years: 0 chronic 5 acute

Complete the following chart for the last three whole effluent toxicity tests. Allow one column per test. Copy this page if more than three tests are being reported.

	4 th Most Recent	5 th Most Recent	
A. Test Information			
Test Method Number	Cerio. dubia/Pim. promelas	Cerio. dubia/Pim. promelas	
Final Report Number	1511428	1407813	
Outfall Number	001	001	
Dates Sample Collected	01/07/2013 - 01/08/2013	01/23/2012 - 01/24/2012	
Date Test Started	01/09/2013	01/25/2012	
Duration	48 hours	48 hours	
B. Toxicity Test Methods Followed			
Manual Title	USEPA. 2002. Methods for Measuring the Acute Toxicity of		
Edition Number and Year of Publication	Effluents and Receiving Waters to Freshwater and Marine		
Page Number(s)	Organisms, 5th Ed., EPA-821-R-02-012		
C. Sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used			
24-Hour Composite	X	X	
Grab			
D. Indicate where the sample was taken in relation to disinfection (Check all that apply for each)			
Before Disinfection	X	X	<input type="checkbox"/>
After Disinfection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Dechlorination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Describe the point in the treatment process at which the sample was collected			
Sample Was Collected:	Effluent Discharge	Effluent Discharge	
F. Indicate whether the test was intended to assess chronic toxicity, acute toxicity, or both			
Chronic Toxicity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acute Toxicity	X	X	<input type="checkbox"/>
G. Provide the type of test performed			
Static	X	X	<input type="checkbox"/>
Static-renewal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flow-through	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Source of dilution water. If laboratory water, specify type; if receiving water, specify source			
Laboratory Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receiving Water	X Mississippi River	X Mississippi River	<input type="checkbox"/>

FACILITY NAME MSD - Bissell Point WWTP	PERMIT NO. MO- 0025178	OUTFALL NO. 001
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PART E - TOXICITY TESTING DATA

17. TOXICITY TESTING DATA (continued)

	4 th Most Recent	5 th Most Recent	
I. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.			
Fresh Water	X	X	
Salt Water			

J. Percentage of effluent used for all concentrations in the test series			
	AEC = 15.1%	AEC = 15.1%	

K. Parameters measured during the test (State whether parameter meets test method specifications)			
pH	Meets test specifications	Meets test specifications	
Salinity	Meets test specifications	Meets test specifications	
Temperature	Meets test specifications	Meets test specifications	
Ammonia	Meets test specifications	Meets test specifications	
Dissolved Oxygen	Meets test specifications	Meets test specifications	

L. Test Results			
Acute:			
Percent Survival in 100% Effluent			
LC ₅₀	>60.4% Effluent, both species	>60.4% Effluent, both species	
95% C.I.			
Control Percent Survival			
Other (Describe)			

Chronic: N/A			
NOEC			
IC ₂₅			
Control Percent Survival			
Other (Describe)			

M. Quality Control/ Quality Assurance			
Is reference toxicant data available?	Yes	Yes	
Was reference toxicant test within acceptable bounds?	Yes	Yes	
What date was reference toxicant test run (MM/DD/YYYY)?	01/09/2013	01/11/2012	
Other (Describe)			

Is the treatment works involved in a toxicity reduction evaluation? ☐ Yes ☒ No

If yes, describe:

If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date Submitted (MM/DD/YYYY)

Summary of Results (See Instructions)

END OF PART E

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL

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MSD - Bissell Point WWTP

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PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

Refer to the APPLICATION OVERVIEW to determine whether Part F applies to the treatment works.

18. GENERAL INFORMATION**18.1** Does the treatment works have, or is it subject to, an approved pretreatment program?☒ Yes☐ No**18.2** Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works:Number of non-categorical SIUs 50Number of CIUs 27**19. INDUSTRIES CONTRIBUTING MORE THAN 5 PERCENT OF THE ACTUAL FLOW TO THE FACILITY OR OTHER SIGNIFICANT INDUSTRIAL USERS INFORMATION**

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, provide the information requested for each. Submit additional pages as necessary.

NAME

See Attachment 19

MAILING ADDRESS

CITY

STATE

ZIP CODE

19.1 Describe all of the industrial processes that affect or contribute to the SIU's discharge**See Attachment 19****19.2** Describe all of the principle processes and raw materials that affect or contribute to the SIU's discharge.

Principal Product(s):

See Attachment 19

Raw Material(s):

19.3 Flow Rate**See Attachment 19****a. PROCESS WASTEWATER FLOW RATE.** Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent.

gpd

☐ Continuous☐ Intermittent**b. NON-PROCESS WASTEWATER FLOW RATE.** Indicate the average daily volume of non-process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent.

gpd

☐ Continuous☐ Intermittent**19.4** Pretreatment Standards. Indicate whether the SIU is subject to the following:**a. Local Limits**☐ Yes☐ No**b. Categorical Pretreatment Standards**☐ Yes☐ No

If subject to categorical pretreatment standards, which category and subcategory?

See Attachment 19**19.5** Problems at the treatment works attributed to waste discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?☐ Yes☒ No

If Yes, describe each episode

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL

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PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES**20. RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE**

20.1 Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail or dedicated pipe?
☐ Yes ☒ No

20.2 Method by which RCRA waste is received. (Check all that apply)

☐ Truck☐ Rail☐ Dedicated Pipe**20.3 Waste Description**

EPA Hazardous Waste Number	Amount (volume or mass)	Units

21. CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER

21.1 Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

☒ Yes☐ No

Provide a list of sites and the requested information for each current and future site.

See Attachment 21

21.2 Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

See Attachment 21

21.3 List the hazardous constituents that are received (or are expected to be received). Included data on volume and concentration, if known. (Attach additional sheets if necessary)

See Attachment 21**21.4 Waste Treatment**

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

☐ Yes☐ No**See Attachment 21**

If Yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

☐ Continuous☐ Intermittent

If intermittent, describe the discharge schedule:

END OF PART F**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.**

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL

FACILITY NAME

MSD - Bissell Point WWTP

PERMIT NO.

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PART G - COMBINED SEWER SYSTEMS

Refer to the APPLICATION OVERVIEW to determine whether Part G applies to the treatment works.

22. GENERAL INFORMATION**22.1 System Map.** Provide a map indicating the following: (May be included with basic application information.)

- A. All CSO Discharges. **See Attachment 22**
- B. Sensitive Use Areas Potentially Affected by CSOs. (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems and Outstanding Natural Resource Waters.)
- C. Waters that Support Threatened and Endangered Species Potentially Affected by CSOs.

22.2 System Diagram. Provide a diagram, either in the map provided above or on a separate drawing, of the Combined Sewer Collection System that includes the following information: **See Attachment 22**

- A. Locations of Major Sewer Trunk Lines, Both Combined and Separate Sanitary.
- B. Locations of Points where Separate Sanitary Sewers Feed into the Combined Sewer System.
- C. Locations of In-Line or Off-Line Storage Structures.
- D. Locations of Flow-Regulating Devices.
- E. Locations of Pump Stations.

22.3 Percent of collection system that is combined sewer Approximately 64% (based on sewer length).**22.4** Population served by combined sewer collection system Approximately 200,000.**22.5** Name of any satellite community with combined sewer collection system None**23. CSO OUTFALLS. COMPLETE THE FOLLOWING ONCE FOR EACH CSO DISCHARGE POINT****23.1** Description of Outfall

- a. Outfall Number **See Attachment 23**
- b. Location
- c. Distance from Shore (if applicable) _____ ft
- d. Depth Below Surface (if applicable) _____ ft
- e. Which of the following were monitored during the last year for this CSO?
 - ☐ Rainfall ☐ CSO Pollutant Concentrations ☐ CSO
 - ☐ CSO Flow Volume ☐ Receiving Water Quality
- f. How many storm events were monitored last year?

23.2 CSO Events**See Attachment 23**

- a. Give the Number of CSO Events in the Last Year Events ☐ Actual ☐ Approximate
- b. Give the Average Duration Per CSO Event
 - ☐ Actual ☐ Approximate
- c. Give the Average Volume Per CSO Event
 - ☐ Actual ☐ Approximate
- d. Give the minimum rainfall that caused a CSO event in the last year _____ inches of rainfall

23.3 Description of Receiving Waters**See Attachment 23**

- a. Name of Receiving Water
- b. Name of Watershed/River/Stream System
- c. U.S. Soil Conservation Service 14-Digit Watershed Code (If Known)
- d. Name of State Management/River Basin
- e. U.S. Geological Survey 8- Digit Hydrologic Cataloging Unit Code (If Known)

23.4 CSO Operations

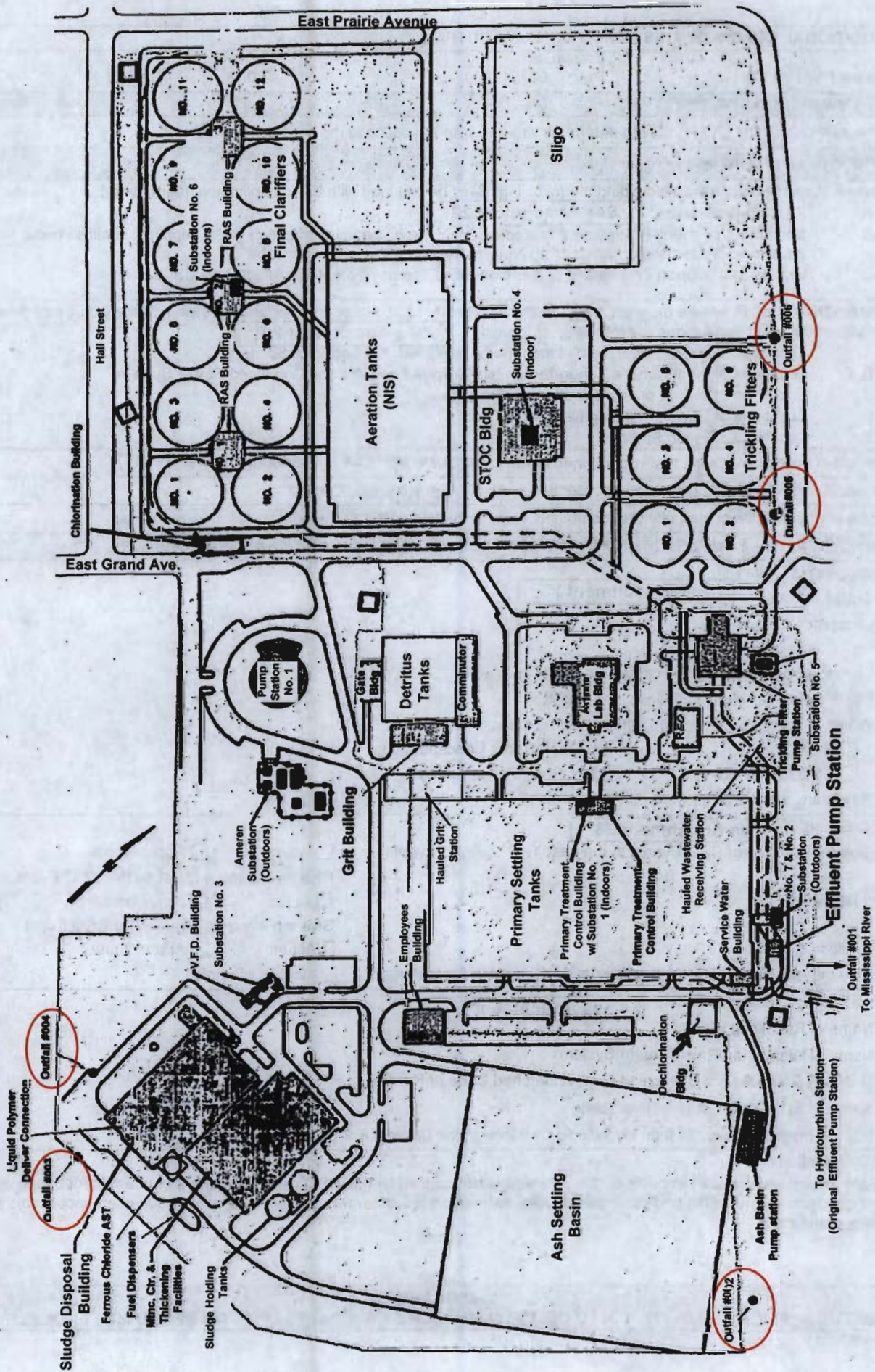
Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shellfish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable state water quality standard.)

None.

END OF PART G**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.**

Attachment 2.4a: MSD - Bissell Point WWTP Stormwater Outfall Locations

Metropolitan St. Louis Sewer District
Bissell Point Wastewater Treatment Plant
Facility Diagram



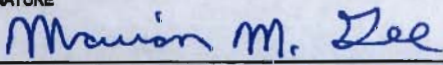
Attachment 2.4b: Stormwater Outfall Descriptions

Outfall	Description
Outfall #002	Outfall #002 is a stormwater outfall located along the southeast perimeter of the plant that discharges to a permitted CSO which ultimately discharges to the Mississippi River. Outfall #002 receives surface runoff water from the area of the plant containing the Administration/Lab Building; Trickling Filter Pump Station; Substation Nos. 1, 2, and 7; Effluent Pump Station; Primary Settling Tanks; Primary Treatment Control Building; Service Water Building; and Ash Basin Pump Station.
Outfall #003 & Outfall #004	Outfalls #003 and #004 are stormwater outfalls located along the southwest perimeter of the plant that discharge to Ferry Pond. Ferry Pond discharges to a permitted CSO that ultimately discharges to Mississippi River. Outfalls #003 and #004 receive surface water runoff from the area of the plant containing the Ameren Substation, Pump Station No. 1, Substation No. 3, the V.F.D. Building, Sludge Disposal Building, Maintenance Center & Thickening Facilities, Sludge Holding Tanks, and the Ash Settling Basins.
Outfall #005 & Outfall #006	Outfalls #005 and #006 are stormwater outfalls located along the northeast perimeter of the plant that discharge to a permitted CSO which discharges to the Mississippi River. Outfalls #005 and #006 receive surface water runoff from the area of the plant containing the trickling filters and the adjacent grassy area.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
FINANCIAL QUESTIONNAIRE

NOTE ►	FINANCIAL INFORMATION THAT IS NOT PROVIDED THROUGH THIS FORM WILL BE OBTAINED BY THE DEPARTMENT FROM READILY AVAILABLE SOURCES.	
1. GENERAL INFORMATION		
FACILITY NAME MSD - Bissell Point WWTP		PERMIT NUMBER #MO- 0025178
CITY St. Louis		COUNTY St. Louis City
<input checked="" type="checkbox"/> PERMIT RENEWAL/MODIFICATION <input type="checkbox"/> STATE REVOLVING FUND APPLICATION		SRF PROJECT NUMBER (IF APPLICABLE) C295
2. GENERAL FINANCIAL INFORMATION (ALL FACILITIES)		
2.1 Number of connections to the facility: Approximately 70,900 total connections		
2.2 Current sewer user rate: Based on a 5,000 gallon per month usage \$ 39.73 Per Single Family Residence		The sewer user rate is (check one): <input type="checkbox"/> Rate Capacity (set rate) <input checked="" type="checkbox"/> Pay as You Go
2.3 Current operating costs for the facility (excludes depreciation):		District Wide: \$177,879,000
2.4 Bond Rating (if applicable):		Moody Aa1, Standard & Poor AAA, Fitch AA+
2.5 Bonding Capacity: <i>General obligation bond capacity allowed by constitution: cities=up to 20% of taxable tangible property; sewer districts=up to 5% of taxable tangible property</i>		\$1,314,421,435
2.6 Current outstanding debt relating to wastewater collection and treatment: <i>Debt information is typically available from your community's annual financial statements</i>		\$1,135,101,426
2.7 Amount of current user rate per household per month used toward payments on wastewater debt:		\$8.80 of \$39.73 equating to 21%
2.8 Net direct debt: <i>Net direct debt is the total amount of outstanding general obligation debt, including notes and short-term financing.</i>		\$0.00 (MSD has no outstanding GO Debt)
2.9 Overlapping debt: <i>Overlapping debt is the financial obligations of one political jurisdiction that also falls partly on a nearby jurisdiction.</i>		\$1,924,778,665
2.10 Overall net debt: <i>Overall net debt is defined as debt repaid by property taxes within a utility/municipality's service area. It excludes debt that is repaid by special user fees (e.g. revenue bonds). Overall net debt = Net direct debt + Overlapping debt. Debt information is typically available from your community's annual financial statements</i>		\$1,924,778,665 (MSD's revenue bonds were excluded)
2.11 Attach any relevant financial statements.		See attachment 2.11.1
3. FINANCIAL INFORMATION SPECIFIC TO MUNICIPALITIES		
3.1 Municipality's Full Market Property Value (FMPV): <i>FMPV data is typically available through your community or state assessor's office</i>		\$28,288,428,702 (City, County, & District Ext)
3.2 Municipality's property tax revenues: <i>Property tax revenues are typically available from your community's annual financial statements</i>		\$24,764,324
3.3 Municipality's property tax collection rate: <i>To determine the collection rate, you will need to divide property tax revenues by the property taxes levied. To calculate property taxes levied, multiply the assessed value of real property within your community/service area by the property tax rate. This information is typically available through your community or state assessor's office. Property tax revenues are typically available in your community's annual financial statements.</i>		96%

4. FINANCIAL INFORMATION SPECIFIC TO SEWER DISTRICTS	
4.1 Total connections to the sewer district: Approximately 385,135 total connections	
4.2 When facilities require upgrades, how are the costs divided? Will the homes connected to the upgraded facility bear the costs? Will the costs be divided across the sewer district?	
Costs are divided district wide and implemented with rate commission proposals.	
5. OTHER CONSIDERATIONS (ALL FACILITIES)	
5.1 Provide a list of major infrastructure or other investments in environmental projects. Include project timing and costs and indicate any possible overlap or complications (attach sheets as necessary):	
MSD is executing a 23 year Consent Decree agreement with the EPA. A list of major infrastructure projects can be found in MSD's Sanitary Sewer Overflow Control Master Plan final revision dated 8/29/2014.	
5.2 Provide a list of any other relevant local community economic conditions that may impact the ability to afford new permit requirements or the proposed SRF project. (See Community Supplemental Survey on the following page):	
6. CERTIFICATION	
FINANCIAL CONTACT Marion M. Gee	OFFICIAL TITLE Director of Finance
EMAIL ADDRESS Mgee@stmsd.com	TELEPHONE NUMBER WITH AREA CODE (314) 768-6299
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.	
OWNER OR AUTHORIZED REPRESENTATIVE Marion M. Gee	OFFICIAL TITLE Director of Finance
SIGNATURE 	DATE SIGNED 7-5-16
For additional guidance, see http://usmayors.org/urbanwater/media/2013/0529-report-WaterAffordability.pdf .	
For more information regarding your Missouri State Operating Permit, contact the department's Water Protection Program at 573-751-1300, to speak with a permit writer in the domestic wastewater unit.	
For more information regarding your State Revolving Fund Application, contact the department's Water Protection Program at 573-751-1300, to speak with a project coordinator in the Financial Assistance Center.	
This completed form and any attachments should be submitted to one of the following:	
For Submittal of Permit Renewal/Modification: Department of Natural Resources Water Protection Program ATTN: NPDES Operating Permits Section P.O. Box 176 Jefferson City, MO 65102	For Submittal of SRF Applications: Department of Natural Resources Water Protection Program ATTN: Financial Assistance Center P.O. Box 176 Jefferson City, MO 65102

Attachment 2.11.1

Financial data presented in this questionnaire can be found in the following reports which can be accessed via MSD's website using the links provided:

Comprehensive Annual Financial Report for fiscal year 2015:

http://www.stlmsd.com/sites/default/files/annual_report/The%20Metropolitan%20St%20%20Louis%20Sewer%20District%202015%20CAFR%20Final.pdf

Popular Annual Financial Report for fiscal year 2015:

http://www.stlmsd.com/sites/default/files/annual_report/MSD%202015%20PAFR.pdf

Budget

<http://www.stlmsd.com/our-organization/fiscal-investor-relations/budget>



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
Community Supplemental Survey

PLEASE ANSWER THE FOLLOWING APPLICABLE QUESTIONS. (ATTACH ADDITIONAL SHEETS AS NECESSARY)

1. Are there any significant transportation corridors within 20 miles of your community?

If yes, please explain. (Example: major interstate, railroad center)

Yes, major city with multiple of the above examples present.

2. Are there any significant manufacturing or employment centers within 20 miles of your community?

If yes, please explain. (Example: commercial farming, manufacturing, government operation, big box store)

Yes, major city with many of the above examples present.

3. Where do the majority of children in your community receive their education?
(Please check appropriate box for each education level)

Elementary	<input checked="" type="checkbox"/> Within your community	<input type="checkbox"/> Within 20 miles	<input type="checkbox"/> Farther than 20 miles
Middle School	<input checked="" type="checkbox"/> Within your community	<input type="checkbox"/> Within 20 miles	<input type="checkbox"/> Farther than 20 miles
High School	<input checked="" type="checkbox"/> Within your community	<input type="checkbox"/> Within 20 miles	<input type="checkbox"/> Farther than 20 miles

4. Considering your community's tax base, debt level, ability to bond capital improvement projects, or repay loans, how likely is it that your community could afford to pay for the following:

- 4.1 An upgrade or replacements to your wastewater system costing \$50,000
- 4.2 An upgrade or replacements to your wastewater system costing \$250,000
- 4.3 An upgrade or replacements to your wastewater system costing \$1 million

Very Unlikely	Unlikely	Likely	Very Likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5. Which of the following best describes anticipated population change for your community over the next ten years?

☐ Significant Decrease ☒ Decrease ☐ Remain the Same ☐ Increase ☐ Significant Increase

6. Check the appropriate boxes in the following statements as it relates to the population change you predicted in questions 5.

6.1 Over the past 20 years the population has:

☐ Significantly Decreased ☒ Decreased ☐ Remained the Same ☐ Increased ☐ Significantly Increased

6.2 The majority of the population in the community is retired or is near retirement.

☐ Definitely False ☒ Probably False ☐ Probably True ☐ True ☐ Unknown

6.3 The majority of young people leave the community in search of employment or education elsewhere.

☐ Definitely False ☒ Probably False ☐ Probably True ☐ True ☐ Unknown

6.4 In the foreseeable future, the employment opportunity in or around the community will:

☐ Significantly Decrease ☐ Decrease ☒ Remain the Same ☐ Increase ☐ Significantly Increase

6.5 In the foreseeable future the economic activity in or around the community will:

☐ Significantly Decrease ☐ Decrease ☒ Remain the Same ☐ Increase ☐ Significantly Increase

6.6 In the foreseeable future the tax base of the community will:

☐ Significantly Decrease ☐ Decrease ☒ Remain the Same ☐ Increase ☐ Significantly Increase

6.7 It is _____ for the community to meet its debt obligations.

☐ Difficult ☐ Somewhat Difficult ☐ Somewhat Easy ☒ Easy ☐ No Debt

7. What other issues or information should be considered when determining population stability or the financial ability for your community to pay for significant capital investments? Attach sheets as necessary.
(Example: Seasonal population changes, natural resources (lakes, rivers), age of infrastructure, significant employment changes, etc.)

MSD is executing a 23 year Consent Decree agreement with the EPA. A list of major infrastructure projects can be found in MSD's Sanitary Sewer Overflow Control Master Plan final revision dated 8/29/2014.

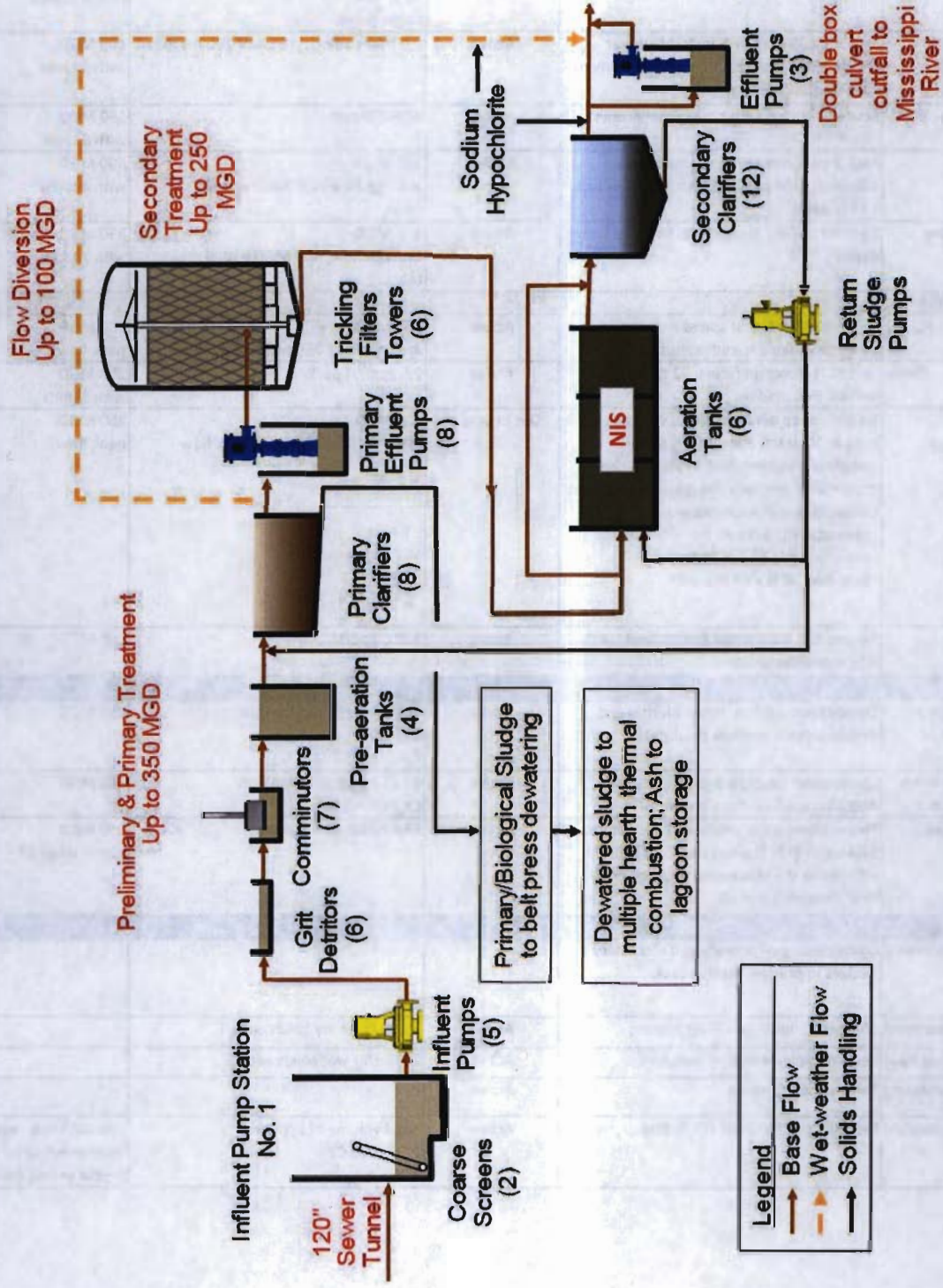
8. Should an existing or proposed regional wastewater district be willing to connect, own, or operate your current facility, how likely would you be to consider this as an option?

Very Unlikely	Unlikely	Likely	Very Likely
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Attachment 5: Bissell Point WWTP Operator's Licenses

Name	Plant	Certificate Level	Certificate Number	Expiration Date
Bailey (Sherwood) Wyatt	BT	D	13151	4/30/2019
Buffy Santel	BT	D	13797	12/31/2017
Colton Weber	BT	D	13618	4/30/2017
Darren Montgomery	BT	D	8324	3/31/2018
Edward Masiero	BT	D	13142	4/30/2019
Eric Hemker	BT	A	9239	4/30/2017
Eric V. Jones	BT	A	11821	12/31/2018
Henry Cardwell	BT	D	12558	3/31/2018
James Alderman	BT	A	12420	4/30/2019
Joe Rachid	BT	A	9725	4/30/2019
John Smiley	BT	A	10879	10/31/2017
Kyle Ruppert	BT	D	12729	4/30/2018
Michael Malone	BT	A	9829	3/31/2018
Rebecca Coyle	BT	A	3245	5/31/2018
Richard Reckamp	BT	A	4212	7/31/2018
Robert Wilson	BT	C	12500	2/28/2019
Ronald Coleman	BT	D	2378	12/31/2017
Ron Skief	BT	A	9663	1/31/2019
Scot Heatherly	BT	A	4192	3/31/2018
Steve Pyatt	BT	D	12942	2/28/2019
Steve Vickrey	BT	A	9734	6/30/2018
Tamar Godfrey	BT	D	10871	6/30/2019
Thomas Vernier	BT	A	3885	9/30/2018
Timothy Thomas	BT	A	9679	6/30/2017
William Olms	BT	A	11989	4/30/2019
William Murray	BT	A	10278	5/31/2019

Attachment 7.1a: Bissell Point WWTP Schematic Diagram



Attachment 7.1b: Bissell Point WWTP Unit Process Descriptions and Capacities

Unit Process	Description	Status	Design Basis	Design Capacity
Pump Station No. 1				
Screens	Two 12 ft wide mechanically-cleaned bar screens with 2½-inch clear bar spacing	Active		
Pumps	Five 1,750 hp pumps	Active	70,000 gpm at 76 ft head, single pump	350 MGD with 4 pumps
Grit Removal	Six 55 ft x 55 ft x 5 ft-5-inch side water depth; 3,025 sf each; circular motor driven collector mechanisms	Active	0.5 ft/sec velocity; 95% of 100 mesh grit	400 MGD with 5 tanks
Comminution	Seven 54-inch rotary-type comminutors	Active	60 MGD each	360 MGD with 6 units
Pre-aeration	Four 2-pass tanks with coarse bubble diffusers. Each pass is 23 ft x 152 ft-6-inch x 15 ft deep.	Active	248 MGD average flow; 400 MGD with 4 tanks	400 MGD with 4 tanks
Primary Settling	Eight 86 ft x 312 ft clarifiers, 13 ft side water depth	Active	248 MGD average flow; 400 MGD with 8 tanks	350 MGD with 7 tanks
Trickling Filters				
Pumps	Six 40 MGD constant speed and two 50 to 90 MGD variable speed pumps	Active	150 MGD average flow, 250 MGD peak flow	250 MGD peak flow
Filters	Six 134 ft diameter filters, 32 ft deep; vertical PVC media	Active	2.5 gpm/sf peak	250 MGD with 5 units
Aeration (Not In Service)	Six 30 ft deep aeration tanks, with fine-bubble diffusers, operated in either complete-mix/plug-flow mode or sludge-re-aeration/complete-mix/plug-flow mode. Compartment dimensions are: - reaeration 110 ft x 80 ft - complete mix 86 ft x 80 ft - plug flow 36 ft x 85 ft-6-inch	Out of service	150 MGD average flow, 250 MGD peak flow	250 MGD peak flow
Final Settling	Twelve 150 ft diameter center feed, 16 ft side water depth	Active	1,200 gpd/sf	250 MGD
Disinfection				
Primary-treated effluent	Chlorination (sodium hypochlorite) and dechlorination (sodium bisulfite)	Active	4 to 14 mg/l chlorine dose CT = 80 mg-min/l	150 MGD
Secondary effluent	Chlorination (sodium hypochlorite) and dechlorination (sodium bisulfite)	Active	4 to 14 mg/l chlorine dose CT = 60 mg-min/l	300 MGD
Effluent Pumping and Outfall	Three submersible propeller type pumps, 86.4 MGD @27 ft static head, lift treated effluent to the Mississippi River when the river exceeds Stage 33	Active	86.4 MGD each pump	250 MGD above stage 33
Solids Handling				
Thickening	Co-thickening of primary and secondary sludges in primary settling tanks			
Dewatering	Thirteen 2-meter belt filter presses	Active	2,000 lb/hr dry solids each	
Incineration	Four multiple-hearth incinerators	Active	10 ton/hr wet solids each	
Ash dewatering	Two ash slurry basins	Active		
Ash disposal	Landfilling at Prospect Hill facility	Active	Total volume of approx. 2,000,000 CY ash	Has sufficient capacity to receive ash beyond the next 5-year permit cycle

Attachment 7.1c: Out of Service Aeration Tanks

When the Bissell Point WWTP secondary treatment operations were constructed, the plant processes included trickling filters and activated sludge in series. Anheuser-Busch improved its pre-treatment operations to reduce the strength of its discharge to MSD. After these improvements, the wastewater strength was insufficient to sustain both processes in series, and MSD asked DNR in August 2000 to discontinue use of the activated sludge process. MSD continued conversations with DNR to modify the operating permit, and the January 2012 Bissell Point WWTP State Operating Permit was modified to only reference the trickling filter process. Neither the CBOD nor the TSS effluent limitations in the operating permit changed after the activated sludge process was taken out of service.

Compliance data since January 2012 shows that the CBOD concentration in the plant effluent was consistently below permitted weekly and monthly limits (40 mg/l and 25 mg/l, respectively). TSS concentrations in the plant effluent were also below permitted weekly and monthly limits (45 mg/l and 30 mg/l, respectively), except for June and December 2015 (monthly limits). Regional flooding and higher water surface elevations characterized those periods.

Data in the attached chart of Effluent TSS vs. River Elevation shows that TSS concentrations in the effluent are more variable as river levels rise (Chart 1) and flows to the plant increase (Chart 2). During periods of high river levels, MSD must use a series of gates along the Mississippi River floodwall to operate the permitted CSO system and protect it from excessive inflow. Even so, flow into the plant from groundwater and surface water sources increase as river levels rise (Chart 3). These changes not only affect the influent concentration of sediment into the system, but also the type of solids and degree to which solids can settle from the system.

A compliance review should consider that the Mississippi River's stage affects the plant and can cause an upset condition to occur. Given the limitations of treatment during these conditions, MSD is requesting modifying TSS effluent limits. MSD requests revision of the TSS limits to those allowed for trickling filters under Missouri regulations [10 CSR 20-7.015(2)(A)]. Those limits, which would better reflect the actual secondary process at the plant, are a monthly average of 45 mg/L and a weekly average of 65 mg/L.

MSD is investigating whether the former activated sludge aeration tanks could be re-used, however MSD does not have a need to reactivate the activated sludge process for the current and anticipated loads to the plant.

MSD contends that discontinuing use of the activated sludge process due to changes in influent load was a "material and substantial alteration to the permitted facility" due to events MSD had no control over and had no reasonable remedy. MSD has operated the facilities to meet the effluent limitations, but has not been able to achieve the effluent limits during periods of high river levels.

Attachment 7.2: MSD - Bissell Point WWTP



Tuesday, June 21, 2016 11:04:34 AM CDT Missouri Department of Natural Resources

This timestamp indicates the date and time the map was generated. Data layers in the map are updated at a variety of intervals and may not reflect current conditions. Disclaimer: Although this map has been compiled by the Missouri Department of Natural Resources, no warranty, expressed or implied, is made by the department as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the department in the use of these data or related materials.

The plant has six equalization bins that store sludge cake before it is fed to the incinerators and a seventh bin that receives sludge cake from other MSD facilities. Sludge is fed to the first six bins when the corresponding incinerator is in service. Each of these bins can hold 26 cubic yards of 20-30 % solids material. Each bin is roughly equivalent to 1 to 2 hours of storage for its container.

Attachment 16a: Part D Metals Data

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method	Reporting Limit (RL)
	Conc.	Units	Conc.	Units	No. of Samples		
Aluminum	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-
Arsenic	4.0	ug/L	3.4	ug/L	17	Std. Methods 3125B	8 ug/L
Beryllium	-	-	-	-	-	-	-
Cadmium	5.4	ug/L	0.2	ug/L	17	Std. Methods 3125B	9 ug/L
Chromium III	7.0	ug/L	1.2	ug/L	17	Std. Methods 3500	10 ug/L
Chromium VI (Dissolved)	16.0	ug/L	5.0	ug/L	17	Std. Methods 3500	10 ug/L
Copper	35.0	ug/L	2.8	ug/L	17	Std. Methods 3125B	9 ug/L
Iron	-	-	-	-	-	-	-
Lead	10.0	ug/L	0.4	ug/L	17	Std. Methods 3125B	20 ug/L
Mercury	6.6	ug/L	0.2	ug/L	17	Std. Methods 3125B	0.3 ug/L
Nickel	20.0	ug/L	4.0	ug/L	17	Std. Methods 3125B	40 ug/L
Selenium	-	-	-	-	-	-	-
Silver	3.0	ug/L	2.0	ug/L	17	Std. Methods 3125B	6 ug/L
Thallium	-	-	-	-	-	-	-
Zinc	86.0	ug/L	10.0	ug/L	17	Std. Methods 3125B	30 ug/L
Cyanide (Amenable to Chlorine)	24.0	ug/L	2.0	ug/L	17	Std. Methods 4500	20 ug/L
Total Phenolic Compounds	-	-	-	-	-	-	-
Hardness (as CaCO ₃)	364.0	mg/L	276.0	mg/L	4	Std. Methods 2340	10 mg/L

Attachment 16b: Part D TTO Data

Pollutant	Maximum Daily Discharge	Average Daily Discharge		Analytical Method	Reporting Limit (RL), mg/L
	Concentration, mg/L	Concentration, mg/L	No. of Samples		
VOLATILE ORGANIC COMPOUNDS					
ACROLEIN	<RL	<RL	4	EPA 603	0.01
ACRYLONITRILE	<RL	<RL	4	EPA 603	0.01
BENZENE	<RL	<RL	4	EPA 624	0.01
BROMOFORM	<RL	<RL	4	EPA 624	0.01
CARBON TETRACHLORIDE	<RL	<RL	4	EPA 624	0.01
CHLOROBENZENE	<RL	<RL	4	EPA 624	0.01
CHLORODIBROMOMETHANE	<RL	<RL	4	EPA 624	0.01
CHLOROETHANE	<RL	<RL	4	EPA 624	0.01
2-CHLOROETHYL VINYL ETHER	<RL	<RL	4	EPA 624	0.01
CHLOROFORM	<RL	<RL	4	EPA 624	0.01
DICHLOROBROMOMETHANE	<RL	<RL	4	EPA 624	0.01
1,1-DICHLOROETHANE	<RL	<RL	4	EPA 624	0.01
1,2-DICHLOROETHANE	<RL	<RL	4	EPA 624	0.01
TRANS-1,2-DICHLOROETHYLENE	<RL	<RL	4	EPA 624	0.01
1,1-DICHLOROETHYLENE	<RL	<RL	4	EPA 624	0.01
1,2-DICHLOROPROPANE	<RL	<RL	4	EPA 624	0.01
1,3-DICHLOROPROPYLENE	-	-	-	EPA 624	0.01
ETHYLBENZENE	<RL	<RL	4	EPA 624	0.01
METHYL BROMIDE	<RL	<RL	4	EPA 624	0.01
METHYL CHLORIDE	<RL	<RL	4	EPA 624	0.01
METHYLENE CHLORIDE	<RL	<RL	4	EPA 624	0.01
1,1,2,2-TETRACHLOROETHANE	<RL	<RL	4	EPA 624	0.01
TETRACHLOROETHANE	<RL	<RL	4	EPA 624	0.01
TOLUENE	<RL	<RL	4	EPA 624	0.01
1,1,1-TRICHLOROETHANE	<RL	<RL	4	EPA 624	0.01
1,1,2-TRICHLOROETHANE	<RL	<RL	4	EPA 624	0.01
TRICHLOROETHYLENE	<RL	<RL	4	EPA 624	0.01
VINYL CHLORIDE	<RL	<RL	4	EPA 624	0.01
ACID-EXTRACTABLE COMPOUNDS					
P-CHLORO-M-CRESOL	<RL	<RL	4	EPA 625	0.01
2-CHLOROPHENOL	<RL	<RL	4	EPA 625	0.01
2,4-DICHLOROPHENOL	<RL	<RL	4	EPA 625	0.01
2,4-DIMETHYLPHENOL	<RL	<RL	4	EPA 625	0.01
4,6-DINITRO-O-CRESOL	<RL	<RL	4	EPA 625	0.1
2,4-DINITROPHENOL	<RL	<RL	4	EPA 625	0.2
2-NITROPHENOL	<RL	<RL	4	EPA 625	0.01
4-NITROPHENOL	<RL	<RL	4	EPA 625	0.025
PENTACHLOROPHENOL	<RL	<RL	4	EPA 625	0.025
PHENOL	<RL	<RL	4	EPA 625	0.01
2,4,6-TRICHLOROPHENOL	<RL	<RL	4	EPA 625	0.01
BASE-NEUTRAL COMPOUNDS					
ACENAPHTHENE	<RL	<RL	4	EPA 625	0.01
ACENAPHTHYLENE	<RL	<RL	4	EPA 625	0.01
ANTHRACENE	<RL	<RL	4	EPA 625	0.01
BENZIDINE	<RL	<RL	4	EPA 625	0.08
BENZO(A)ANTHRACENE	<RL	<RL	4	EPA 625	0.01
BENZO(A)PYRENE	<RL	<RL	4	EPA 625	0.01

Attachment 16b: Part D TTO Data

Pollutant	Maximum Daily Discharge	Average Daily Discharge		Analytical Method	Reporting Limit (RL), mg/L
	Concentration, mg/L	Concentration, mg/L	No. of Samples		
3,4-BENZOFUORANTHENE	<RL	<RL	4	EPA 625	0.01
BENZO(GH) PHERYLENE	-	-	-	EPA 625	0.01
BENZO(K) FLUORANTHENE	-	-	-	EPA 625	0.01
BIS (2-CHLOROTHXY) METHANE	<RL	<RL	4	EPA 625	0.01
BIS (2-CHLOROETHYL) ETHER	<RL	<RL	4	EPA 625	0.01
BIS (2-CHLOROISOPROPYL) ETHER	<RL	<RL	4	EPA 625	0.01
BIS (2-ETHYLHEXYL) PHTHALATE	<RL	<RL	4	EPA 625	0.01
4-BROMOPHENYL PHENYL ETHER	<RL	<RL	4	EPA 625	0.01
BUTYL BENZYL PHTHALATE	0.0105	<RL	4	EPA 625	0.01
2-CHLORONAPHTHALENE	<RL	<RL	4	EPA 625	0.01
4-CHLORPHENYL PHENYL ETHER	<RL	<RL	4	EPA 625	0.01
CHRYSENE	<RL	<RL	4	EPA 625	0.01
DI-N-BUTYL PHTHALATE	<RL	<RL	4	EPA 625	0.01
DI-N-OCTYL PHTHALATE	<RL	<RL	4	EPA 625	0.01
DIBENZO (A,H) ANTHRACENE	-	-	-	EPA 625	0.01
1,2-DICHLOROBENZENE	<RL	<RL	4	EPA 625	0.01
1,3-DICHLOROBENZENE	<RL	<RL	4	EPA 625	0.01
1,4-DICHLOROBENZENE	<RL	<RL	4	EPA 624	0.01
3,3-DICHLOROBENZIDINE	<RL	<RL	4	EPA 625	0.01
DIETHYL PHTHALATE	<RL	<RL	4	EPA 625	0.01
DIMETHYL PHTHALATE	<RL	<RL	4	EPA 625	0.01
2,4-DINITROTOLUENE	<RL	<RL	4	EPA 625	0.01
2,6-DINITROTOLUENE	<RL	<RL	4	EPA 625	0.01
1,2-DIPHENYLHYDRAZINE	<RL	<RL	4	EPA 625	0.01
FLUORANTHENE	<RL	<RL	4	EPA 625	0.01
FLUORENE	<RL	<RL	4	EPA 625	0.01
HEXACHLOROBENZENE	<RL	<RL	4	EPA 625	0.01
HEXACHLOROBUTADIENE	<RL	<RL	4	EPA 625	0.01
HEXACHLOROCYCLOPENTADIENE	<RL	<RL	4	EPA 625	0.01
HEXACHLOROETHANE	<RL	<RL	4	EPA 625	0.01
INDENO (1,2,3-CD) PYRENE	<RL	<RL	4	EPA 625	0.01
ISOPHORONE	<RL	<RL	4	EPA 625	0.01
NAPHTHALENE	<RL	<RL	4	EPA 625	0.01
NITROBENZENE	<RL	<RL	4	EPA 625	0.01
N-NITROSODIPROPYLAMINE	<RL	<RL	4	EPA 625	0.01
N-NITROSODIMETHYLAMINE	<RL	<RL	4	EPA 625	0.01
N-NITROSODIPHENYLAMINE	<RL	<RL	4	EPA 625	0.01
PHENANTHRENE	<RL	<RL	4	EPA 625	0.01
PYRENE	<RL	<RL	4	EPA 625	0.01
1,2,4-TRICHLOROBENZENE	<RL	<RL	4	EPA 625	0.01
OTHERS					
4,4-DDD	<RL	<RL	4	EPA 608	0.001
4,4-DDE	<RL	<RL	4	EPA 608	0.001
4,4-DDT	<RL	<RL	4	EPA 608	0.001
ALDRIN	<RL	<RL	4	EPA 608	0.00005
ALPHA-BHC	<RL	<RL	4	EPA 608	0.00005
ALPHA-endosulfan	<RL	<RL	4	EPA 608	0.00005
BETA-BHC	0.0025	0.0019	4	EPA 608	0.00005

Attachment 16b: Part D TTO Data

Pollutant	Maximum Daily Discharge	Average Daily Discharge		Analytical Method	Reporting Limit (RL), mg/L
	Concentration, mg/L	Concentration, mg/L	No. of Samples		
BETA-endosulfan	<RL	<RL	4	EPA 608	0.001
Bis (2-chloroethoxy) methane	<RL	<RL	4	EPA 625	0.01
CHLORDANE	<RL	<RL	4	EPA 608	0.005
DELTA-BHC	<RL	<RL	4	EPA 608	0.0005
DIELDRIN	<RL	<RL	4	EPA 608	0.001
ENDOSULFAN SULFATE	<RL	<RL	4	EPA 608	0.001
ENDRIN	<RL	<RL	4	EPA 608	0.001
ENDRIN ALDEHYDE	<RL	<RL	4	EPA 608	0.001
GAMMA-BHC	<RL	<RL	4	EPA 608	0.00005
HEPTACHLOR	0.00025	0.00019	4	EPA 608	0.00005
HEPTACHLOR EPOXIDE	<RL	<RL	4	EPA 608	0.00005
PCB-1016	<RL	<RL	4	EPA 608	0.005
PCB-1221	<RL	<RL	4	EPA 608	0.001
PCB-1232	0.015	0.011	4	EPA 608	0.0005
PCB-1242	<RL	<RL	4	EPA 608	0.0005
PCB-1248	<RL	<RL	4	EPA 608	0.0005
PCB-1254	<RL	<RL	4	EPA 608	0.01
PCB-1260	<RL	<RL	4	EPA 608	0.01
TOXAPHENE	<RL	<RL	4	EPA 608	0.005

ATTACHMENT 19: Part F - Industrial Users

PIMS

DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
------------	---------------	-----------------	------	-------	-----	---------------	------------

Bissell Point

1011923301	AFFTON TERMINAL SERVICES	420 Gimblin	St. Louis	MO	63147	Interior truck tanker washing service	SIU CIU
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Raw Materials: Heated water

Product/Service:

Cleaned truck tanks

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

DISCHARGE IS

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
901	Categorical	442 Sub A PSNS	BATCH	REGULATED	4,000	Gallons per Day	
001	Categorical	442 Sub A PSNS (from SP901)	BATCH	DILUTE	4,000	Gallons per Day	
001	Non-Categorical Process Waste	From SP901	BATCH	DILUTE	1,500	Gallons per Day	
901	Non-Categorical Process Waste	Exterior vehicle wash	BATCH	DILUTE	1,500	Gallons per Day	
001	Sanitary		CONT	DILUTE	60	Gallons per Day	
001	Wastewater From Other Tenants		CONT	DILUTE	1,000	Gallons per Day	

1016212000

ALSCO INC

315 Lynch St.

St. Louis

MO 63118

Commercial laundry

SIU

Raw Materials: Dirty laundry

Product/Service:

Cleaned laundry

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

DISCHARGE IS

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
001	Boiler Blowdown		BATCH	DILUTE	500	Gallons per Day	
001	Plant & Equipment Washdown		BATCH	DILUTE	100	Gallons per Day	
001	Process Waste	Laundry operations	CONT	DILUTE	37,875	Gallons per Day	
001	Sanitary		CONT	DILUTE	1,500	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Regeneration/Reject Water		BATCH	DILUTE	2,000	Gallons per Day	

Report No. PIMS074A

Data Date & Time

6/1/2016

10:21:00AM

6/1/2016

10:20:54AM

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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1020644700	AMERICAN PLATING CO	3527 Park Ave.	St. Louis	MO	63104	Electroplater	SIU CIU
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Raw Materials:

Product/Service: Custom & commercial plated finishes

Silver
Copper
Brass
Nickel
Gold
Caustic
Muriatic acid
Sulfuric acid

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
004	Categorical	413 Sub A,B&E JS L10K PSES	BATCH	REGULATED	1,158	Gallons per Day	
001	Sanitary		CONT	DILUTE	156	Gallons per Day	

1045097000

AMERICAN RIVER
TRANSPORTATION COMPANY

P.O. Box 2889

St. Louis

MO 63111 Barge transporter of dry and
liquid goods

SIU

CIU

Raw Materials:

Product/Service:

Towboat supply service
Tank truck cleaning for food-grade oils
Dry hopper barge cleaning

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
003	Boiler Blowdown		BATCH	DILUTE	1,000	Gallons per Day	
904	Categorical	442 Sub C PSNS	BATCH	DILUTE	35,000	Gallons per Day	
003	Plant & Equipment Washdown	bilge; truck tk wash; offsite bilge 437.1.b2	BATCH	DILUTE	1,500	Gallons per Day	
003	Process Waste	exmpt	BATCH	DILUTE	23,924	Gallons per Day	
903	Process Waste	Hopper barge cleaning	BATCH	DILUTE	7,721	Gallons per Day	
003	Sanitary		CONT	DILUTE	2,000	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
902	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Containment Area Water	From tank farm	BATCH	DILUTE	200	Gallons per Day	
003	Flow From Upstream Sample Point	SP902 (san.), 903 (hopper wash), & 904 (eth./dies)	BATCH	DILUTE	2,753	Gallons per Day	
902	Wastewater From Other Tenants	Sanitary	CONT	DILUTE	500	Gallons per Day	
003	Groundwater infiltration	Spring water	CONT	DILUTE	1,800	Gallons per Day	

Report No. PIMS074A

6/1/2016

10:21:00AM

Data Date & Time

6/1/2016

10:20:54AM

PIMS

DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

1016242300 ANHEUSER-BUSCH LLC

One Busch Place

St. Louis

MO 63118

Malt beverage brewer

SIU

Raw Materials:

Barley
Malt
Yeast
Corn
Rice
Hops

Product/Service:
Malt beverages

Report No. PIMS074A

Data Date & Time

6/1/2016

6/1/2016

10:21:00AM

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PIMS

DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO INDUSTRY NAME MAILING ADDRESS CITY STATE ZIP BUSINESS DESC CATEGORIES

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT DESC
100	Boiler Blowdown		BATCH	DILUTE	19,000	Gallons per Day
095	Contact Cooling Water	On bottles and cans to cool after pasteur process	BATCH	DILUTE	1,000	Gallons per Day
283	Non Contact Cooling Water		BATCH	DILUTE	23,500	Gallons per Day
100	Non Contact Cooling Water		BATCH	DILUTE	125,000	Gallons per Day
140	Plant & Equipment Washdown		BATCH	DILUTE	500	Gallons per Day
150	Plant & Equipment Washdown		BATCH	DILUTE	998	Gallons per Day
130	Plant & Equipment Washdown		BATCH	DILUTE	1,000	Gallons per Day
111	Plant & Equipment Washdown		BATCH	DILUTE	999	Gallons per Day
100	Plant & Equipment Washdown		BATCH	DILUTE	10,000	Gallons per Day
077	Plant & Equipment Washdown	From bldg 20A	BATCH	DILUTE	200	Gallons per Day
082	Plant & Equipment Washdown	From bldg 156	BATCH	DILUTE	200	Gallons per Day
241	Plant & Equipment Washdown	Equipment cleaning	BATCH	DILUTE	5,000	Gallons per Day
283	Plant & Equipment Washdown		BATCH	DILUTE	160,000	Gallons per Day
040	Plant & Equipment Washdown	From bldg 233	BATCH	DILUTE	500	Gallons per Day
241	Process Waste	stock house storage, fermenting, & aging of beer	BATCH	DILUTE	1,000	Gallons per Day
283	Process Waste	Malt beverage brewing & packaging	BATCH	DILUTE	2,472,000	Gallons per Day
015	Sanitary	From bldgs 140,141,166, 166A,173,174, 240	CONT	DILUTE	100	Gallons per Day
070	Sanitary	From bldg 20	CONT	DILUTE	100	Gallons per Day
075	Sanitary	Bldg 245	CONT	DILUTE	2,000	Gallons per Day
077	Sanitary	From bldg 20A	CONT	DILUTE	500	Gallons per Day
082	Sanitary	From bldg 156	CONT	DILUTE	1,500	Gallons per Day
090	Sanitary	Buildings 16,17,18,19,149,149A,149B	CONT	DILUTE	300	Gallons per Day
100	Sanitary	Bldgs 5,5a,6,7,8,152,179,225, 230, 231,236	CONT	DILUTE	200	Gallons per Day
110	Sanitary	Bldg 137	BATCH	DILUTE	500	Gallons per Day
111	Sanitary	Bldg 137	CONT	DILUTE	1	Gallons per Day
120	Sanitary	Bldg 137	CONT	DILUTE	2,000	Gallons per Day
130	Sanitary	Bldg 137	CONT	DILUTE	8,000	Gallons per Day
140	Sanitary	Bldg 205	CONT	DILUTE	1,000	Gallons per Day
150	Sanitary	Bldg 137	CONT	DILUTE	1	Gallons per Day
200	Sanitary	From bldg 167,138, 176, 138A	CONT	DILUTE	300	Gallons per Day
283	Sanitary	From sources throughout campus	CONT	DILUTE	2,500	Gallons per Day
285	Sanitary	From driver's lounge	CONT	DILUTE	999	Gallons per Day
287	Sanitary	From guard house	CONT	DILUTE	499	Gallons per Day
241	Sanitary	From bldgs 210,226,189,57,221,222,215,46	CONT	DILUTE	7,500	Gallons per Day
230	Sanitary	From buildings 202 & 181	CONT	DILUTE	20,000	Gallons per Day
215	Sanitary	Building 260	CONT	DILUTE	8,500	Gallons per Day

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ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
015	Storm Water	From RR Yard				BATCH	0 Gallons per Day
181	Storm Water	From bldg 21,26,30,31A,36,190,233 and parking area				BATCH	0 Gallons per Day
040	Storm Water	From ABOL drive lanes				BATCH	0 Gallons per Day
289	Storm Water	From ABOL drive lanes				BATCH	0 Gallons per Day
288	Storm Water	From guard house roof and parking area				BATCH	0 Gallons per Day
287	Storm Water	From ABOL far SW corner				BATCH	0 Gallons per Day
286	Storm Water	From driver's lounge roof and parking area				BATCH	0 Gallons per Day
285	Storm Water	From sources throughout campus				BATCH	0 Gallons per Day
283	Storm Water	From roofs and parking areas along Lynch				BATCH	0 Gallons per Day
241	Storm Water	From vacant lot @ 9th and Arsenal				BATCH	0 Gallons per Day
060	Storm Water	Bldgs 5,5a,6,7,8,152,179,225,231,236				BATCH	0 Gallons per Day
070	Storm Water	Bldg 137				BATCH	0 Gallons per Day
100	Storm Water	From bldg 137				BATCH	0 Gallons per Day
110	Storm Water	From S end of shipping facility				BATCH	0 Gallons per Day
150	Storm Water	From whse roof and parking areas				BATCH	0 Gallons per Day
170	Storm Water	From parking lots N of whse bldgs				BATCH	0 Gallons per Day
190	Storm Water	From bldgs 1,1A,1C,2, 168				BATCH	0 Gallons per Day
200	Storm Water	From bldgs 181 & 202 roof and loading docks				BATCH	0 Gallons per Day
210	Storm Water	From bldg 156				BATCH	0 Gallons per Day
225	Storm Water	From bldg 20A				BATCH	0 Gallons per Day
230	Storm Water	Bldg 230				BATCH	0 Gallons per Day
082	Laboratory Waste					BATCH	1,000 Gallons per Day
077	Laboratory Waste					BATCH	1,000 Gallons per Day
100	Laboratory Waste					BATCH	50 Gallons per Day
230	Kitchen Waste					BATCH	2,000 Gallons per Day
241	Kitchen Waste					BATCH	1,500 Gallons per Day
030	Emergency Bypass	San, storm, process, P+E (to SP283)				BATCH	0 Gallons per Day
160	Emergency Bypass	San, storm, process, P+E, CCW (to SP283)				BATCH	0 Gallons per Day
181	Emergency Bypass	BERS				BATCH	0 Gallons per Day
110	Emergency Bypass	BERS Bypass				BATCH	0 Million Gallons per Day

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

1016199000 ARCHWAY ANODIZING

2120 Miami St.

St. Louis

MO 63118

Anodizing job shop

SIU CIU

Raw Materials:

Sulfuric Acid
Sodium Hydroxide
Nickel Sulfate
Chromium Black Dye

Product/Service:

Job shop for anodizing aluminum parts

Discharge

Component Info:

SP DISCHARGE COMPONENT PROCESS DESCRIPTION

002 Boiler Blowdown

001 Categorical

002 Plant & Equipment Washdown 433 Sub A PSNS

002 Sanitary Floor mopping office area

002 Storm Water

DISCHARGE IS STREAM IS AVG FLOW UNIT DESC

BATCH

DILUTE

REGULATED

DILUTE

DILUTE

DILUTE

DILUTE

CONT

BATCH

CONT

BATCH

CONT

BATCH

5 Gallons per Day

2,999 Gallons per Day

5 Gallons per Day

75 Gallons per Day

0 Gallons per Day

SIU CIU

1011810500 ASSOCIATED EQUIPMENT CORP 5043 Farlin Avenue

St Louis

MO 63115

Mfg. battery chargers and transformers

Raw Materials:

Steel
Wire

Product/Service:

Battery chargers
Fume Extractors

Discharge

Component Info:

SP DISCHARGE COMPONENT PROCESS DESCRIPTION

002 Categorical

001 Sanitary

001 Storm Water

433 Sub A PSNS

(including office/bathroom mopping)

BATCH

REGULATED

DILUTE

DILUTE

312 Gallons per Day

1,492 Gallons per Day

0 Gallons per Day

SIU CIU

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

SIU CIU

MO 63630 Chemical manufacturer

BUCKMAN USA, CADET PLANT 14664 Highway 47

Cadet

Raw Materials:

Sodium hydroxide
Carbon disulfide
Dimethylamine
Monomehtylamine
Ethylene dichloride

Product/Service:

Defoamers
Biocides
Paper-making strength aides

Discharge

Component Info:

SP DISCHARGE COMPONENT PROCESS DESCRIPTION

DISCHARGE IS STREAM IS AVG FLOW UNIT DESC

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT DESC
001	Non Contact Cooling Water		BATCH	DILUTE	6,000	Gallons per Day
001	Plant & Equipment Washdown		BATCH	DILUTE	600	Gallons per Day
001	Regeneration/Reject Water		BATCH	DILUTE	1,800	Gallons per Day

1016267500 CHRISTIAN HOSPITAL

11133 Dunn Road

St. Louis

MO 63136 Hospital services

SIU

Raw Materials:

Product/Service:

General Hospital & Health Care Services

Discharge

Component Info:

SP DISCHARGE COMPONENT PROCESS DESCRIPTION

DISCHARGE IS STREAM IS AVG FLOW UNIT DESC

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT DESC
001	Non Contact Cooling Water		CONT	DILUTE	13,325	Gallons per Day
001	Sanitary		CONT	DILUTE	36,000	Gallons per Day
001	Hospital Waste		CONT	DILUTE	82,876	Gallons per Day
001	Kitchen Waste		CONT	DILUTE	5,000	Gallons per Day

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP BUSINESS DESC

1020509600 CLEAN THE UNIFORM COMPANY

1316 S. 7th St

St. Louis

MO 63104

Uniform cleaning service

SIU

Raw Materials:

Prism
Dober Brite
Vortex
LID
Chlorine bleach
Bannish
Super Riduge

Product/Service:

Industrial laundry

Discharge

Component Info:

SP DISCHARGE COMPONENT
005 Boiler Blowdown
005 Non Contact Cooling Water
005 Plant & Equipment Washdown
005 Process Waste
004 Sanitary
005 Storm Water
005 Regeneration/Reject Water

PROCESS DESCRIPTION

Heat water for laundry process

Commercial washers

DISCHARGE IS

CONT
CONT
CONT
CONT
CONT
BATCH
CONT

STREAM IS

DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE

AVG FLOW

700
200
500
41,339
1,754
0
2,500

UNIT

Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day

DESC

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------------	---------------	-----------------	------	-------	-----	---------------	------------

1011839100	COMMERCIAL PLATING COMPANY	9100 Riverview Dr	St. Louis	MO	63137	Electroplating various metals on metal parts	SIU CIU
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Raw Materials: Brass Cadmium Copper Nickel Tin Zinc

Product/Service: Electroplating job shop

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION
002	Boiler Blowdown	Heats metal plating tanks
002	Categorical	From SP901
901	Categorical	413 Sub A PSES JS G10K
002	Sanitary	
002	Storm Water	

DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
BATCH	DILUTE	50	Gallons per Day	
BATCH	DILUTE	58,745	Gallons per Day	
CONT	REGULATED	58,745	Gallons per Day	
CONT	DILUTE	500	Gallons per Day	
BATCH	DILUTE	0	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

1011829100 DIAL CORPORATION

6901 McKissock Ave

St. Louis

MO 63147 Soap & Detergent Mfr

SIU

Raw Materials:

Salt

Soda ash

Sodium silicate

Sodium polyacrylate

Various surfactants

Tinapol

Caustics

Propylene glycol

Glycerin

Denatonium benzoate

Ethanol

Sulfur

Sulfonic acid

Alkylate

Chloroform

Product/Service:

Liquid laundry detergents

Air fresheners

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

DISCHARGE IS STREAM IS

AVG FLOW

UNIT DESC

001

Boiler Blowdown

Plant & Equipment Washdown

Flush lines, clean tanks, etc

BATCH

DILUTE

1,260

Gallons per Day

001

Plant & Equipment Washdown

Flush lines, clean tanks, etc

CONT

DILUTE

43,816

Gallons per Day

003

Sanitary

Storm Water

Flush lines, clean tanks, etc

CONT

DILUTE

2,536

Gallons per Day

001

Storm Water

Storm Water

Flush lines, clean tanks, etc

BATCH

DILUTE

0

Gallons per Day

003

Storm Water

Storm Water

Flush lines, clean tanks, etc

BATCH

DILUTE

0

Gallons per Day

001

Laboratory Waste

Wastewater From Other Tenants

Flush lines, clean tanks, etc

BATCH

DILUTE

400

Gallons per Day

003

Wastewater From Other Tenants

Wastewater From Other Tenants

Flush lines, clean tanks, etc

CONT

DILUTE

1,151

Gallons per Day

001

Regeneration/Reject Water

Regeneration/Reject Water

Flush lines, clean tanks, etc

CONT

DILUTE

19,367

Gallons per Day

001

Cooling Tower Blowdown

Cooling Tower Blowdown

Flush lines, clean tanks, etc

CONT

DILUTE

1,552

Gallons per Day

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ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
------------	---------------	-----------------	------	-------	-----	---------------	------------

1020703500	FAULTLESS HEALTH CARE LINEN SERVICE	2030 S. Broadway	St. Louis	MO	63104	Commercial laundering of hospital linen	SIU
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Raw Materials: Caustic cleaner
Water
Gear Lubricant
Hydraulic Compressor Oil
Hydrogen Peroxide

Product/Service: Commercial laundering of hospital linen

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
003	Boiler Blowdown		BATCH	DILUTE	1,096	Gallons per Day	
003	Process Waste	commercial laundering of linen+carts	CONT	DILUTE	27,284	Gallons per Day	
002	Sanitary	Breakroom	BATCH	DILUTE	65	Gallons per Day	
001	Sanitary		CONT	DILUTE	690	Gallons per Day	
003	Sanitary		CONT	DILUTE	173	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Regeneration/Reject Water	water softener	BATCH	DILUTE	996	Gallons per Day	

1045528901

FAULTLESS HEALTHCARE
LINEN SERVICE

1615 N. 25th St.

St. Louis

MO 63106

Commercial laundering of
hospital linen

SIU

Raw Materials:

Water
Detergents
Caustic cleaner
Gear Lubricant
Hydraulic Compressor Oil
Hydrogen Peroxide

Product/Service: Commercial laundering of hospital linen

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
001	Boiler Blowdown		BATCH	DILUTE	370	Gallons per Day	
001	Process Waste	Commercial laundering of linen+carts	CONT	DILUTE	31,450	Gallons per Day	
001	Sanitary		CONT	DILUTE	1,000	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Regeneration/Reject Water	Water softener	BATCH	DILUTE	750	Gallons per Day	

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ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
------------	---------------	-----------------	------	-------	-----	---------------	------------

1020512900	GLAXOSMITHKLINE	320 S. Broadway	St. Louis	MO	63102	Pharmaceutical Manufacturer	SIU CIU
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Raw Materials:

Sugar

CaCO₃

Starch

Talc

Mineral oil

Color

Water based coating

Flavorings

Product/Service:

Os-Cal (crushed oyster), Tums, Citruscel

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
007	Cooling Tower Blowdown		BATCH	DILUTE	2,959	Gallons per Day	
006	Regeneration/Reject Water	DI waste	BATCH	DILUTE	2,550	Gallons per Day	
002	Kitchen Waste		BATCH	DILUTE	3,199	Gallons per Day	
001	Laboratory Waste		BATCH	UNREG	255	Gallons per Day	
002	Laboratory Waste	QC lab waste	BATCH	DILUTE	765	Gallons per Day	
007	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
006	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
005	Storm Water		BATCH	DILUTE	0	Gallons per Day	
004	Storm Water		BATCH	DILUTE	0	Gallons per Day	
002	Sanitary		CONT	DILUTE	1,880	Gallons per Day	
001	Sanitary		CONT	DILUTE	1,284	Gallons per Day	
007	Sanitary		CONT	DILUTE	1,754	Gallons per Day	
006	Sanitary		CONT	DILUTE	32	Gallons per Day	
005	Plant & Equipment Washdown		BATCH	UNREG	191	Gallons per Day	
005	Non Contact Cooling Water		BATCH	DILUTE	310	Gallons per Day	
005	Categorical	439 Sub D PSNS (CWF-yes)	BATCH	REGULATED	1,275	Gallons per Day	
001	Categorical	439 Sub D PSNS (CWF-yes)	BATCH	REGULATED	3,821	Gallons per Day	
006	Categorical	439 Sub D PSES (CWF-yes)	BATCH	REGULATED	310	Gallons per Day	

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY

STATE

ZIP

BUSINESS DESC

SIU CIU

1011730300 HERMANN OAK LEATHER CO

4050 N. 1st St.

St. Louis

MO 63147

Leather tanner

Raw Materials:

Cattle hides
Vegetable extract
Water
Lime
Dyes

Product/Service:
Tanned & finished leather

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

DISCHARGE IS

STREAM IS

AVG FLOW

UNIT

DESC

001 Boiler Blowdown
001 Categorical
001 Non Contact Cooling Water
001 Plant & Equipment Washdown
001 Sanitary
003 Sanitary
005 Sanitary
002 Sanitary
004 Sanitary
001 Storm Water
002 Storm Water
004 Storm Water
003 Storm Water
005 Storm Water

BATCH
BATCH
BATCH
BATCH
CONT
CONT
CONT
CONT
CONT
BATCH
BATCH
BATCH
BATCH
BATCH

DILUTE
REGULATED
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE
DILUTE

2,000
123,672
2,000
2,500
700
150
300
200
100
0
0
0
0
0

Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
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Gallons per Day
Gallons per Day
Gallons per Day

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)							

1020549900	INTERCON CHEMICAL COMPANY	1100 Central Industrial Drive	St. Louis	MO 63110	Soap Manufacturer	SIU CIU
<i>Raw Materials:</i>	Surfactants				Detergents	
	Dye, perfume, mineral oil				Disinfectants	
	Water					
		<i>Product/Service:</i>				
<i>Discharge Component Info:</i>	<u>SP</u>	<u>DISCHARGE COMPONENT</u>	<u>PROCESS DESCRIPTION</u>	<u>DISCHARGE IS</u>	<u>STREAM IS</u>	<u>AVG FLOW</u> <u>UNIT</u> <u>DESC</u>
	004	Categorical	417 Sub P, Q PSNS	BATCH	REGULATED	17,853 Gallons per Day
	004	Non-Categorical Process Waste		BATCH	DILUTE	3,150 Gallons per Day
	004	Process Waste	417 Sub H NA (Gen Stds only)	BATCH	DILUTE	100 Gallons per Day
	003	Sanitary		CONT	DILUTE	2,100 Gallons per Day
	003	Storm Water		BATCH	DILUTE	0 Gallons per Day
	003	Laboratory Waste	QC and R & D Labs	BATCH	DILUTE	50 Gallons per Day
	003	Wastewater From Other Tenants	Bay Insulation (San.), Cont. Res(San, lab wash)	CONT	DILUTE	900 Gallons per Day

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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1047157100	JOST CHEMICAL CO	8150 Lackland Road	St Louis	MO	63114	Manufacturer of inorganic salts for food	SIU CIU
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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME MAILING ADDRESS CITY STATE ZIP BUSINESS DESC

Raw Materials:

Product/Service:

Ammonium bicarbonate
Calcium chloride
Caustic potash
Citric acid
Fumaric acid
Glucono delta lactone
Hydrogen peroxide
Lactic acid
Magnesium oxide
Malic acid
Manganese metal
Iron filings
Nitric acid
Phosphoric acid
Soda ash
Sodium chloride
Succinic anhydride
Sulfuric acid
Tetrasodium pyrophosphate
Zinc oxide
Ammonia
Ascorbic acid
Aspartic acid
Calcium carbonate
Celestite
Chromic acid
Copper carbonate
Formic acid
Manganese carbonate
Octanoic acid
Sodium bicarbonate
Strontium carbonate
Ammonium Sulfate
Calcium Hydroxide
Carbon Dioxide
Carnauba wax
Copper Sulfate Pentahydrate

Ammonium citrate
Ammonium phosphate
Calcium citrate
Calcium citrate malate
Calcium hydroxide
Calcium phosphate
Cupric sulfate
Ferrous fumarate
Ferrous gluconate
Magnesium lactate
Magnesium phosphate
Manganese lactate
Manganese gluconate
Manganese citrate
Manganese sulfate
Potassium nitrate
Potassium sulfate
Sodium carbonate
Sodium phosphate
Sodium sulfate
Tetrasodium pyrophosphate
Ferric ammonium citrate
Magnesium citrate
Potassium phosphate
Sodium succinate
Copper gluconate
Ferric citrate
Ferrous citrate
Magnesium ascorbate
Magnesium aspartate
Magnesium gluconate
Magnesium malate
Manganese ascorbate
Strontium nitrate
Zinc citrate
Zinc gluconate
Zinc lactate
Magnesium sulfate
Ammonium sulfate
Calcium Fumarate

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

Ferric Sulfate
 Hydrogenated Palm Oil
 Hydrogenated Cottonseed Oil
 Isopropyl Alcohol
 Magnesium Sulfate Heptahydrate
 300 SC Iron Fillings
 Mono & Diglycerides
 Potassium Nitrate
 Sodium Hydrosulfide
 Stearic Acid
 Succinic Acid
 Stannous Chloride
 TSPP
 Zinc dust

Calcium Magnesium Citrate
 Calcium Malate
 Calcium Succinate
 Copper Citrate
 Copper Oxide
 Dipotassium Citrate
 Ferric Phosphate Hydrate
 Ferrous Ammonium Sulfate
 Ferrous Lactate Dihydrate
 Potassium Carbonate
 Potassium Gluconate
 Sodium Bisulfate
 Sodium Caprylate

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
001	Categorical	From SP901	BATCH	DILUTE	277,400	Gallons per Day	
901	Categorical	415 Sub AJ PSNS	BATCH	DILUTE	277,400	Gallons per Day	
902	Categorical	415 Sub AJ PSNS	BATCH	DILUTE	277,400	Gallons per Day	
002	Categorical	From 902	BATCH	DILUTE	277,400	Gallons per Day	
002	Non-Categorical Process Waste	food grade chemical mfg	BATCH	DILUTE	13,027	Gallons per Day	
001	Non-Categorical Process Waste	food grade chemical mfg	BATCH	DILUTE	132,026	Gallons per Day	
001	Non Contact Cooling Water		CONT	DILUTE	204,015	Gallons per Day	
002	Non Contact Cooling Water		CONT	DILUTE	20,177	Gallons per Day	
002	Plant & Equipment Washdown	chemical mfg equip & centrifuge	BATCH	DILUTE	3,251	Gallons per Day	
001	Plant & Equipment Washdown	chemical mfg equip & centrifuge	BATCH	DILUTE	32,866	Gallons per Day	
001	Sanitary		CONT	DILUTE	4,120	Gallons per Day	
002	Sanitary		CONT	DILUTE	408	Gallons per Day	
003	Sanitary		CONT	DILUTE	300	Gallons per Day	
003	Laboratory Waste		BATCH	DILUTE	150	Gallons per Day	
002	Laboratory Waste	QC/R&D	BATCH	DILUTE	20	Gallons per Day	
001	Laboratory Waste	QC/R&D	BATCH	DILUTE	180	Gallons per Day	
001	Regeneration/Reject Water	RO reject	BATCH	DILUTE	23,705	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO 1011727700 INDUSTRY NAME KIESEL COMPANY MAILING ADDRESS 4801 Fyler Street CITY St. Louis STATE MO ZIP 63116 BUSINESS DESC Centralized waste treatment & railcar cleaning CATEGORIES SIU CIU

Raw Materials:

Product/Service:

Barge and railroad car cleaning
Wastewater treatment
Bulk fuel distribution

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
901	Boiler Blowdown		BATCH	DILUTE	150	Gallons per Day	
004	Boiler Blowdown	from SP 901	BATCH	DILUTE	150	Gallons per Day	
004	Categorical	from SP 901	BATCH	DILUTE	945	Gallons per Day	
901	Categorical	437 Sub B PSES(345)+442 Sub B PSES(600)	BATCH	REGULATED	945	Gallons per Day	
901	Plant & Equipment Washdown	General plant wash and AST farm containment	BATCH	UNREG	500	Gallons per Day	
004	Plant & Equipment Washdown	from SP 901	BATCH	DILUTE	500	Gallons per Day	
004	Sanitary		CONT	DILUTE	400	Gallons per Day	
004	Storm Water	from SP901	BATCH	DILUTE	0	Gallons per Day	
003	Storm Water	NPDES 001		DILUTE	32	Gallons per Day	
901	Storm Water			DILUTE	0	Gallons per Day	
004	Regeneration/Reject Water	from SP 901	BATCH	DILUTE	40	Gallons per Day	
901	Regeneration/Reject Water		BATCH	DILUTE	40	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY

STATE

ZIP

BUSINESS DESC

1030650700

KILLARK ELECTRIC MFG CO

3940 Dr. Martin Luther
King Drive

St. Louis

MO 63113

Manufacture non-current
carrying wiring devices

SIU CIU

Raw Materials:

Semi-finished iron castings

Semi-finished aluminum castings

Product/Service:

Electrical supply conduit fittings
Lighting fixtures
Electrical panel boxes

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

DISCHARGE IS

STREAM IS

AVG FLOW

UNIT

DESC

901

Categorical

433 Sub A PSNS

DILUTE

508

Gallons per Day

001

Categorical

from SP 901

DILUTE

508

Gallons per Day

002

Non-Categorical Process Waste

Roto jet parts washer

DILUTE

4

Gallons per Day

002

Non Contact Cooling Water

Chiller in lab

DILUTE

2,000

Gallons per Day

001

Non Contact Cooling Water

DILUTE

20

Gallons per Day

003

Sanitary

DILUTE

1,805

Gallons per Day

002

Sanitary

DILUTE

530

Gallons per Day

001

Sanitary

DILUTE

135

Gallons per Day

005

Sanitary

DILUTE

130

Gallons per Day

003

Storm Water

DILUTE

0

Gallons per Day

002

Storm Water

DILUTE

0

Gallons per Day

001

Storm Water

DILUTE

0

Gallons per Day

005

Storm Water

DILUTE

0

Gallons per Day

002

Laboratory Waste

DILUTE

1,000

Gallons per Day

R&D laboratory

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

SIU

MO 63136 Manufacturer of Italian food specialties

1918 Switzer

St. Louis

Raw Materials:

Flour

Meat

Vegetables

Cheese

Tomatoes

Seafood

Product/Service:

Frozen Italian specialties

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

DISCHARGE IS STREAM IS AVG FLOW UNIT DESC

001	Boiler Blowdown		BATCH	DILUTE	25	Gallons per Day
001	Contact Cooling Water		BATCH	DILUTE	20,679	Gallons per Day
001	Plant & Equipment Washdown		BATCH	DILUTE	60,550	Gallons per Day
001	Process Waste	Food preparation	BATCH	DILUTE	700	Gallons per Day
001	Sanitary		CONT	DILUTE	3,675	Gallons per Day
001	Cooling Tower Blowdown		BATCH	DILUTE	50	Gallons per Day

1024322300

MADISON FARMS BUTTER

COMPANY

4112 Papin St.

St. Louis

MO 63110 Butter manufacturer

SIU

Raw Materials:

Cream

Butter

Product/Service:

Butter

Butter oil

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

DISCHARGE IS STREAM IS AVG FLOW UNIT DESC

001	Boiler Blowdown		BATCH	DILUTE	4,500	Gallons per Day
001	Non Contact Cooling Water		BATCH	DILUTE	2,000	Gallons per Day
006	Non Contact Cooling Water		BATCH	DILUTE	6,300	Gallons per Day
006	Plant & Equipment Washdown	Including 405 Sub D NA (Gen Stds Only)	BATCH	DILUTE	67,500	Gallons per Day
006	Process Waste	Including 405 Sub D NA (Gen Stds Only)	BATCH	DILUTE	8,800	Gallons per Day
001	Sanitary		CONT	DILUTE	900	Gallons per Day
006	Storm Water		BATCH	DILUTE	0	Gallons per Day
001	Storm Water	From tanker hookup area	BATCH	DILUTE	0	Gallons per Day

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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1011728100	MALLINCKRODT LLC	3600 N. 2nd Street	St. Louis	MO	63147	Manufacturer of pharmaceuticals	SIU CIU
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Raw Materials:

Product/Service:

Industrial chemicals
FDA drugs

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO INDUSTRY NAME MAILING ADDRESS CITY STATE ZIP BUSINESS DESC CATEGORIES

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
008	Emergency Bypass	Pump station bypass to Salisbury trunk	BATCH	DILUTE	0	Gallons per Day	
011	Emergency Bypass	Overflow from Plant 5	BATCH	DILUTE	0	Gallons per Day	
010	Regeneration/Reject Water		BATCH	DILUTE	130,000	Gallons per Day	
003	Flow From Offsite	From SP 009	BATCH	DILUTE	7,700	Gallons per Day	
009	Flow From Offsite	Offsite W of Broadway	CONT	DILUTE	7,700	Gallons per Day	
010	Kitchen Waste		BATCH	DILUTE	1,421	Gallons per Day	
005	Laboratory Waste	439 Sub E NA (No Stds) & non-439 R&D	BATCH	DILUTE	17,646	Gallons per Day	
099	Laboratory Waste	439 Sub E NA (No Stds) & non-439 R&D	BATCH	DILUTE	5,123	Gallons per Day	
003	Laboratory Waste	439 Sub E NA (No Stds)	BATCH	DILUTE	5,123	Gallons per Day	
080	Laboratory Waste	439 Sub E NA (No Stds) & non-439 R&D	BATCH	DILUTE	569	Gallons per Day	
010	Laboratory Waste	Both QC and R+D	BATCH	DILUTE	38,680	Gallons per Day	
010	Storm Water		BATCH	DILUTE	0	Gallons per Day	
008	Storm Water		BATCH	DILUTE	0	Gallons per Day	
011	Storm Water		BATCH	DILUTE	0	Gallons per Day	
009	Storm Water		BATCH	DILUTE	0	Gallons per Day	
080	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
099	Storm Water		BATCH	DILUTE	0	Gallons per Day	
010	Sanitary		BATCH	DILUTE	0	Gallons per Day	
002	Sanitary		CONT	DILUTE	75,000	Gallons per Day	
001	Sanitary		CONT	DILUTE	2,200	Gallons per Day	
003	Sanitary		CONT	DILUTE	1,000	Gallons per Day	
099	Sanitary		CONT	DILUTE	5,000	Gallons per Day	
010	Process Waste		CONT	DILUTE	5,000	Gallons per Day	
010	Plant & Equipment Washdown	Garage	BATCH	DILUTE	170	Gallons per Day	
010	Plant & Equipment Washdown	General	BATCH	DILUTE	455	Gallons per Day	
010	Plant & Equipment Washdown	General	BATCH	DILUTE	51,172	Gallons per Day	
010	Plant & Equipment Washdown	General	BATCH	DILUTE	1,706	Gallons per Day	
010	Plant & Equipment Washdown	General	BATCH	DILUTE	30,180	Gallons per Day	
005	Non Contact Cooling Water		BATCH	DILUTE	690	Gallons per Day	
010	Non Contact Cooling Water	Includes CT blowdown	BATCH	DILUTE	90,540	Gallons per Day	
912	Non-Categorical Process Waste	ASI process waste from bldgs 504/505	BATCH	DILUTE	114,067	Gallons per Day	
099	Non-Categorical Process Waste		BATCH	DILUTE	2,504	Gallons per Day	
003	Non-Categorical Process Waste	Machine shop, painting, parts washing	BATCH	DILUTE	2,504	Gallons per Day	
933	Categorical	439 Sub B PSES	BATCH	DILUTE	77	Gallons per Day	
080	Categorical	439 Sub C PSES (CN-no, NH3 exempt) (CWF-no)	BATCH	REGULATED	1,938	Gallons per Day	
915	Categorical	439 Sub C PSES (CN-no, NH3 exempt)	BATCH	REGULATED	4,746	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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920	Categorical	439 Sub C PSES (NH3 exempt) - with SP937				BATCH	REGULATED	38,021	Gallons per Day
927	Categorical	439 Sub B PSES				BATCH	DILUTE	4,746	Gallons per Day
010	Categorical	905,912,915,920,927,930,933,936,937,938				BATCH	REGULATED	302,699	Gallons per Day
930	Categorical	439 Sub B PSES				BATCH	REGULATED	550	Gallons per Day
905	Categorical	414 Sub G & H PSES (App A-no)				BATCH	REGULATED	60,676	Gallons per Day
936	Categorical	439 Sub C PSES (CN-no, NH3 exempt)				BATCH	REGULATED	13,957	Gallons per Day
937	Categorical	439 Sub C PSES (NH3 exempt) - with SP937				BATCH	REGULATED	65,820	Gallons per Day
938	Categorical	439 Sub D PSNS				BATCH	REGULATED	40	Gallons per Day
010	Boiler Blowdown					BATCH	DILUTE	17,500	Gallons per Day

7777712300 MALLINCKRODT LLC

100 Louis Latzer Dr.

Greenville

IL 62246

Pharmaceutical Manufacturing

SIU CIU

Raw Materials:

Acetaminophen

Ibuprofen

Starches

Product/Service:

Bulk Pharmaceuticals

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
002	Categorical	40 CFR 439 Sub D, PSES	BATCH	REGULATED	14,000	Gallons per Day	

7777707600 MARATHON PETROLEUM

COMPANY LP, IL REFINING

DIVISION

100 Marathon Avenue

Robinson

IL 62454

Petroleum refining

SIU CIU

Raw Materials: Crude oil

Product/Service:

Refined petroleum products

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
002	Categorical	419 Sub B PSNS	BATCH	REGULATED	9	Gallons per Day	
003	Categorical	419 Sub B PSNS	BATCH	REGULATED	9	Gallons per Day	
004	Categorical	419 Sub B PSNS	BATCH	REGULATED	164	Gallons per Day	
001	Categorical	419 Sub B PSNS	BATCH	DILUTE	54,256	Gallons per Day	
006	Categorical	419 Sub B PSNS	BATCH	REGULATED	82	Gallons per Day	
007	Categorical	419 Sub B PSNS	BATCH	REGULATED	82	Gallons per Day	
008	Categorical	419 Sub B PSNS	BATCH	REGULATED	27	Gallons per Day	
005	Categorical	419 Sub B PSNS	BATCH	REGULATED	164	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)							

1043376500	MERRELL BROS INC ST LOUIS DISPOSAL	6400 McKissock Ave.	St. Louis	MO 63147	Receiving & dewatering liquid septage & grease	SIU		
Raw Materials:	Polymer Water NaOH	Product/Service: Dry cake sludge Effluent water from belt press						
Discharge Component Info:	SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
	001	Plant & Equipment Washdown		BATCH	DILUTE	2,000	Gallons per Day	
	001	Process Waste	Reject water from dewatering	BATCH	DILUTE	31,500	Gallons per Day	
	002	Sanitary		CONT	DILUTE	75	Gallons per Day	
1024433901	MICROFINISH IPC LLC	4001 Gratiot	St. Louis	MO 63110	Job shop electroplater and E-coater	SIU	CIU	
Raw Materials:	Ni HCl NaOH H2SO4 Cr NaHSO4 Zn Cu	Product/Service: Electroplated metal products						
Discharge Component Info:	SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
	002	Boiler Blowdown		BATCH	DILUTE	200	Gallons per Day	
	001	Categorical	413 Sub A PSES JS G10K (CWF-no)	CONT	REGULATED	26,982	Gallons per Day	
	001	Non Contact Cooling Water	Rectifiers	BATCH	DILUTE	1,250	Gallons per Day	
	003	Sanitary		CONT	DILUTE	740	Gallons per Day	
	003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
	002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
	003	Laboratory Waste		BATCH	DILUTE	5	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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1011895400	MIDWEST PLATING COMPANY INC	513 E Gano Ave	St Louis	MO	63147	Manufacture electrical parts	SIU CIU
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Raw Materials: Copper
Tin
Caustic (KOH, NaOH)
Acid (Sulfuric, Nitric)
Aluminum
Sulfate (Stannous, Potassium Copper)
Potassium Cyanide
Zinc

Product/Service: Plated aluminum, tin and copper

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
003	Boiler Blowdown	413 Sub A PSES JS G10K	BATCH	DILUTE	25	Gallons per Day	
001	Categorical		BATCH	REGULATED	33,730	Gallons per Day	
003	Sanitary		CONT	DILUTE	50	Gallons per Day	
002	Sanitary		CONT	DILUTE	150	Gallons per Day	

1020529900 MISSOURI PLATING

2501 Texas Ave

St. Louis

MO 63104 Job Shop Plater

SIU CIU

Raw Materials:

Nickel
Nickel sulfate
Nickel chloride
Chromic acid
Caustic
Copper

Product/Service: Plated parts

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
001	Categorical	413 Sub A PSES JS L10K (CWF=yes)	BATCH	REGULATED	2,030	Gallons per Day	
001	Plant & Equipment Washdown	Floor mopping office area	BATCH	DILUTE	10	Gallons per Day	
001	Sanitary		CONT	DILUTE	120	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

1020516400

NESTLE PURINA PETCARE CO

Checkerboard Square - 2B St. Louis

MO 63164 Research of petcare products

SIU

Raw Materials:

Grain

Meat

Product/Service:

Research & pilot plant for pet foods

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
009	Cooling Tower Blowdown		BATCH	DILUTE	83	Gallons per Day	
005	Cooling Tower Blowdown		BATCH	DILUTE	2,951	Gallons per Day	
010	Cooling Tower Blowdown		BATCH	DILUTE	222	Gallons per Day	
002	Regeneration/Reject Water		BATCH	DILUTE	1,000	Gallons per Day	
005	Regeneration/Reject Water		BATCH	DILUTE	2,000	Gallons per Day	
002	Kitchen Waste		BATCH	DILUTE	3,227	Gallons per Day	
010	Storm Water		BATCH	DILUTE	0	Gallons per Day	
002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
009	Storm Water		BATCH	DILUTE	0	Gallons per Day	
008	Storm Water		BATCH	DILUTE	0	Gallons per Day	
007	Storm Water		BATCH	DILUTE	0	Gallons per Day	
005	Storm Water		BATCH	DILUTE	0	Gallons per Day	
010	Sanitary		CONT	DILUTE	5,459	Gallons per Day	
008	Sanitary		CONT	DILUTE	2,368	Gallons per Day	
009	Sanitary		CONT	DILUTE	5,847	Gallons per Day	
002	Sanitary		CONT	DILUTE	13,405	Gallons per Day	
007	Sanitary		CONT	DILUTE	465	Gallons per Day	
005	Sanitary		CONT	DILUTE	14,161	Gallons per Day	
009	Process Waste	Research labs	BATCH	DILUTE	3,402	Gallons per Day	
002	Process Waste	Pilot plant & research labs	CONT	DILUTE	10,268	Gallons per Day	
010	Process Waste	Research labs	CONT	DILUTE	300	Gallons per Day	
005	Process Waste	Pilot plant + paint clean-up	BATCH	DILUTE	30,471	Gallons per Day	
005	Plant & Equipment Washdown		CONT	DILUTE	9,442	Gallons per Day	
002	Plant & Equipment Washdown		CONT	DILUTE	3,149	Gallons per Day	
005	Boiler Blowdown		BATCH	DILUTE	2,562	Gallons per Day	

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CATEGORIES

ACCOUNT NO 1038391300

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

SIU

Manufacturer of mammalian cell culture proteins

MO 63134

St. Louis

4766 LaGuardia Drive

PATHEON BIOLOGICS LLC

Raw Materials:

Cell culture derived pharmaceutical proteins
Mammalian cell culture derived proteins

Product/Service:

Water
Nutrients
Proteins
Vitamins
Sodium Chloride
NaSO4
Sodium Acetate
Guanidine Hydrochloride
Potassium Hydroxide
Phosphoric Acid
Sodium Hydroxide
Sucrose
Bleach

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

007	Boiler Blowdown		BATCH	DILUTE	146	Gallons per Day
007	Non Contact Cooling Water		BATCH	DILUTE	7,110	Gallons per Day
007	Process Waste	Mfg. process equipment clean-up	BATCH	DILUTE	69,438	Gallons per Day
005	Sanitary		CONT	DILUTE	6,200	Gallons per Day
007	Laboratory Waste	From Bldg 1	BATCH	DILUTE	6,459	Gallons per Day
007	Regeneration/Reject Water		BATCH	DILUTE	8,000	Gallons per Day

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

1046394800 PEPSI BEVERAGES COMPANY One Union 70 Center Drive St. Louis MO 63120 Bottling & canning of soda and water SIU

Raw Materials:

Soft drink flavorings
Sweeteners
Carbon dioxide
Water
Phosphoric and Citric Acids

Product/Service:

Soft drinks
Bottled water

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

DISCHARGE IS

STREAM IS

AVG FLOW

UNIT

DESC

002	Boiler Blowdown	BATCH	DILUTE	50	Gallons per Day
002	Non Contact Cooling Water	CONT	DILUTE	4,500	Gallons per Day
001	Plant & Equipment Washdown	BATCH	DILUTE	4,000	Gallons per Day
002	Plant & Equipment Washdown	BATCH	DILUTE	6,000	Gallons per Day
002	Process Waste	CONT	DILUTE	205,827	Gallons per Day
001	Sanitary	CONT	DILUTE	10,000	Gallons per Day
001	Storm Water	BATCH	DILUTE	0	Gallons per Day
001	Regeneration/Reject Water	CONT	DILUTE	7,600	Gallons per Day

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

1011809700 PQ CORPORATION

4238 Geraldine Avenue

St Louis

MO 63115

Manufacturer of sodium silicate and silica gel

Raw Materials: Silica sand
Sodium carbonate
Sulfuric acid
Magnesium sulfate

Product/Service:

Sodium silicate
Silica gel

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
001	Boiler Blowdown		BATCH	DILUTE	13,200	Gallons per Day	
001	Contact Cooling Water	sodium silicate process	BATCH	DILUTE	3,500	Gallons per Day	
001	Non Contact Cooling Water	pump seal	BATCH	DILUTE	10,000	Gallons per Day	
001	Plant & Equipment Washdown		BATCH	DILUTE	15,000	Gallons per Day	
001	Process Waste	sodium silicate & silica gel rinsate	CONT	DILUTE	86,960	Gallons per Day	
001	Sanitary		CONT	DILUTE	1,000	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Laboratory Waste	glassware washing	BATCH	DILUTE	10	Gallons per Day	
001	Regeneration/Reject Water	softener regeneration	BATCH	DILUTE	18,780	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

1011833600

PROCTER & GAMBLE MFG
COMPANY

169 E. Grand Avenue

St. Louis

MO 63147 Soap/detergent manufacturer

SIU CIU

Raw Materials:

Sodium Carbonate
Sodium Sulfate
Sodium Silicate

Product/Service:

Granular detergent
Gel detergent
Liquid cleaners
Air fresheners
Liquid surfactant

Discharge

Component Info:

SP DISCHARGE COMPONENT PROCESS DESCRIPTIONDISCHARGE IS STREAM IS AVG FLOW UNIT DESC

001	Condensate		BATCH	DILUTE	6,000	Gallons per Day
005	Condensate		BATCH	DILUTE	40,000	Gallons per Day
099	Condensate		BATCH	DILUTE	6,000	Gallons per Day
099	Regeneration/Reject Water		BATCH	DILUTE	41,800	Gallons per Day
001	Regeneration/Reject Water		BATCH	DILUTE	41,800	Gallons per Day
001	Flow From Upstream Sample Point	From SP 004	CONT	DILUTE	193,054	Gallons per Day
004	Flow From Offsite		CONT	DILUTE	193,054	Gallons per Day
099	Laboratory Waste		BATCH	DILUTE	2,500	Gallons per Day
001	Laboratory Waste		BATCH	DILUTE	2,500	Gallons per Day
005	Storm Water		BATCH	DILUTE	0	Gallons per Day
099	Storm Water		BATCH	DILUTE	0	Gallons per Day
004	Storm Water		BATCH	DILUTE	0	Gallons per Day
001	Storm Water		BATCH	DILUTE	0	Gallons per Day
001	Sanitary		CONT	DILUTE	9,000	Gallons per Day
005	Sanitary		CONT	DILUTE	6,000	Gallons per Day
099	Sanitary		CONT	DILUTE	9,000	Gallons per Day
005	Plant & Equipment Washdown	417 Sub Q PSES NA (No Stds)	BATCH	DILUTE	3,560	Gallons per Day
099	Non Contact Cooling Water		BATCH	DILUTE	26,000	Gallons per Day
005	Non Contact Cooling Water		BATCH	DILUTE	53,000	Gallons per Day
001	Non Contact Cooling Water		BATCH	DILUTE	26,000	Gallons per Day
001	Non-Categorical Process Waste	Antifoam dilution	BATCH	DILUTE	12,700	Gallons per Day
099	Non-Categorical Process Waste	Antifoam dilution	BATCH	DILUTE	12,700	Gallons per Day
099	Categorical	417 Sub P PSNS	BATCH	REGULATED	40,400	Gallons per Day
001	Categorical	417 Sub P PSNS	BATCH	REGULATED	40,400	Gallons per Day
001	Boiler Blowdown	Condensate and blowdown	BATCH	DILUTE	6,840	Gallons per Day
099	Boiler Blowdown		BATCH	DILUTE	6,840	Gallons per Day

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

7777708400

PROCTER & GAMBLE PAPER
PRODUCTS CO

P.O. Box 400

Cape Girard MO

63701 Manufacturer of paper tissue &
towel products

SIU CIU

Raw Materials:

Water (emulsion)
Bleached kraft pulp (fiber)
Printing ink

Product/Service:

Paper towels
Bathroom tissue

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
004	Categorical	40 CFR 430 Sub L PSNS	BATCH	REGULATED	110	Gallons per Day	
006	Process Waste	Ink and softener rinse water	BATCH	DILUTE	600	Gallons per Day	

1046282500 RESOURCE RECOVERY STL INC 5300 Hall Street

St. Louis

MO 63147 Oil recycler and cleaning of totes
and drums

SIU CIU

Raw Materials:

Water
Oils
Surfactant

Product/Service:

Refurbishing of totes and 55 gallon drums

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
901	Categorical	40 CFR 437 Sub B PSNS	BATCH	DILUTE	40,000	Gallons per Day	
901	Categorical	From SP901	BATCH	DILUTE	40,000	Gallons per Day	
001	Plant & Equipment Washdown	Floor scrubbing	BATCH	DILUTE	25	Gallons per Day	
002	Plant & Equipment Washdown	Lab glassware (20 gpd), floor mop offices (5g/wk)	BATCH	DILUTE	25	Gallons per Day	
001	Process Waste	Tote washing	BATCH	DILUTE	5,884	Gallons per Day	
002	Sanitary		CONT	DILUTE	80	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Wastewater From Other Tenants	Independent Equipment LLC-Sanitary only	CONT	DILUTE	20	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

SIU

MO 63147 Metal working fluid mfr and oil

RESPONSIBLE CONTAINER LLC 5300 Hall Street

St. Louis

Raw Materials: Water
Soap

Product/Service:

Drum and tote washing

recycler

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION
001	Plant & Equipment Washdown	Floor mopping
001	Process Waste	Tote drum and cap washing
001	Sanitary	
001	Storm Water	
001	Wastewater From Other Tenants	Logistics office-Sanitary only

DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
BATCH	DILUTE	10	Gallons per Day	
CONT	DILUTE	10,000	Gallons per Day	
CONT	DILUTE	200	Gallons per Day	
BATCH	DILUTE	0	Gallons per Day	
CONT	DILUTE	40	Gallons per Day	

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
1011765000	SENSIENT COLORS INC	2515 N. Jefferson Ave.	St. Louis	MO	63106	Dye manufacturer	SIU CIU
Raw Materials:	Assorted acids		Product/Service:			Food, drug and cosmetic colorants	
	Assorted hydroxides					Technical dyes and dye solutions	
	DMAS						
	Organics						
	Salts						
	Liquid bromine						
	M-PYROL						
	Aluminum salts						

ACCOUNT NO

INDUSTRY NAME

MAILING ADDRESS

CITY

STATE

ZIP

BUSINESS DESC

CATEGORIES

DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

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Discharge Component Info:		SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
003	Regeneration/Reject Water				BATCH	DILUTE	45,600	Gallons per Day	
901	Regeneration/Reject Water			RO reject	BATCH	DILUTE	542	Gallons per Day	
001	Regeneration/Reject Water			From SP901	BATCH	DILUTE	542	Gallons per Day	
008	Regeneration/Reject Water				BATCH	DILUTE	100	Gallons per Day	
009	Regeneration/Reject Water			RO reject	BATCH	DILUTE	27,000	Gallons per Day	
010	Regeneration/Reject Water				BATCH	DILUTE	1,000	Gallons per Day	
008	Laboratory Waste			R+D	BATCH	DILUTE	1,451	Gallons per Day	
901	Laboratory Waste			QC Lab	BATCH	UNREG	2,902	Gallons per Day	
001	Laboratory Waste			QC, from SP901	BATCH	DILUTE	2,902	Gallons per Day	
008	Storm Water				BATCH	DILUTE	0	Gallons per Day	
009	Storm Water				BATCH	DILUTE	0	Gallons per Day	
003	Storm Water				BATCH	DILUTE	0	Gallons per Day	
901	Storm Water				BATCH	DILUTE	0	Gallons per Day	
005	Storm Water				BATCH	DILUTE	0	Gallons per Day	
001	Storm Water				BATCH	DILUTE	0	Gallons per Day	
004	Storm Water				BATCH	DILUTE	0	Gallons per Day	
010	Storm Water				BATCH	DILUTE	0	Gallons per Day	
001	Sanitary				CONT	DILUTE	0	Gallons per Day	
005	Sanitary				CONT	DILUTE	2,000	Gallons per Day	
010	Sanitary				CONT	DILUTE	2,500	Gallons per Day	
004	Sanitary				CONT	DILUTE	1,000	Gallons per Day	
008	Sanitary				CONT	DILUTE	4,200	Gallons per Day	
003	Sanitary				CONT	DILUTE	2,549	Gallons per Day	
901	Plant & Equipment Washdown				CONT	DILUTE	1,000	Gallons per Day	
008	Plant & Equipment Washdown				BATCH	REGULATED	75,000	Gallons per Day	
003	Plant & Equipment Washdown				BATCH	DILUTE	100	Gallons per Day	
001	Plant & Equipment Washdown				BATCH	DILUTE	11,400	Gallons per Day	
001	Non Contact Cooling Water				BATCH	DILUTE	30,000	Gallons per Day	
001	Contact Cooling Water				BATCH	DILUTE	6,414	Gallons per Day	
903	Categorical			414 Sub H, PSES (App A-no)	BATCH	DILUTE	8,000	Gallons per Day	
001	Categorical			Process + P&E, from SP901	BATCH	REGULATED	125,000	Gallons per Day	
003	Categorical			From SP903	BATCH	DILUTE	172,806	Gallons per Day	
901	Categorical			414 Sub H PSES (App A-yes) (CWF-no)	BATCH	DILUTE	125,000	Gallons per Day	
001	Boiler Blowdown				BATCH	DILUTE	97,806	Gallons per Day	
							5,000	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

SIU

Laundry, warehouse/distributor
of rags

MO 63103

St. Louis

222 S 21st Street

SERVICE STARS

1020650801

Detergents
Chlorine bleach

Raw Materials:

Product/Service:

Clean linen

Discharge

Component Info:

PROCESS DESCRIPTION

DISCHARGE COMPONENT

SP

001 Boiler Blowdown
001 Process Waste
001 Sanitary
001 Storm Water
001 Regeneration/Reject Water

Laundering

DISCHARGE IS

BATCH
CONT
CONT
BATCH
CONT

STREAM IS

DILUTE
DILUTE
DILUTE
DILUTE
DILUTE

AVG FLOW

10
51,758
520
0
1,000

UNIT DESC

Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day
Gallons per Day

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ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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1016015000	SIGMA ALDRICH MFG LLC	3500 Dekalb Street	St Louis	MO	63118	Manufacturer of industrial organic chemicals	SIU CIU
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Raw Materials:	Extractive media	Product/Service:	Research biochemicals
	Ammonium sulfate		
	Organic reagents		
	General solvents		

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
099	Boiler Blowdown		BATCH	DILUTE	479	Gallons per Day	
001	Boiler Blowdown		BATCH	DILUTE	479	Gallons per Day	
099	Categorical	flow from 902	BATCH	DILUTE	108,631	Gallons per Day	
902	Categorical	414 Sub H PSES (App A-no)	BATCH	REGULATED	108,272	Gallons per Day	
001	Categorical	flow from 902	BATCH	DILUTE	108,631	Gallons per Day	
001	Non Contact Cooling Water		CONT	DILUTE	148,996	Gallons per Day	
099	Non Contact Cooling Water		CONT	DILUTE	148,996	Gallons per Day	
099	Plant & Equipment Washdown		BATCH	DILUTE	13,280	Gallons per Day	
001	Plant & Equipment Washdown		BATCH	DILUTE	13,280	Gallons per Day	
001	Process Waste		CONT	DILUTE	110,070	Gallons per Day	
099	Process Waste		CONT	DILUTE	110,070	Gallons per Day	
001	Sanitary	biochem mfg+scrubbers/pump	CONT	DILUTE	13,398	Gallons per Day	
099	Sanitary		CONT	DILUTE	13,398	Gallons per Day	
099	Storm Water		BATCH	DILUTE	0	Gallons per Day	
002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
099	Laboratory Waste	QC lab	BATCH	DILUTE	40	Gallons per Day	
001	Laboratory Waste	QC lab	BATCH	DILUTE	40	Gallons per Day	
099	Kitchen Waste		BATCH	DILUTE	50	Gallons per Day	
001	Kitchen Waste		BATCH	DILUTE	50	Gallons per Day	
002	Flow From Offsite		CONT	DILUTE	400,000	Gallons per Day	
001	Flow From Upstream Sample Point	upstream 002	CONT	DILUTE	400,000	Gallons per Day	
099	Regeneration/Reject Water		BATCH	DILUTE	4,167	Gallons per Day	
001	Regeneration/Reject Water		BATCH	DILUTE	4,167	Gallons per Day	

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ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
1016207600	SIGMA ALDRICH MFG LLC	3500 Dekalb Street	St. Louis	MO	63118	Manufacturer of organic medicinal chemicals	SIU CIU
	<i>Raw Materials:</i>					<i>Product/Service:</i>	
	Hydrochloric acid					Research biochemicals & pharma	
	Ammonium hydroxide						
	Anhydrol						
	Acetone						
	Methanol						
	Various reagents						

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT DESC
003	Regeneration/Reject Water		BATCH	DILUTE	1,192	Gallons per Day
803	Flow From Upstream Sample Point	Categorical SP003	BATCH	DILUTE	80,860	Gallons per Day
002	Kitchen Waste		BATCH	DILUTE	50	Gallons per Day
005	Laboratory Waste		BATCH	DILUTE	50	Gallons per Day
010	Storm Water	QC and R&D	BATCH	DILUTE	0	Gallons per Day
003	Storm Water		BATCH	DILUTE	0	Gallons per Day
005	Storm Water		BATCH	DILUTE	0	Gallons per Day
007	Storm Water		BATCH	DILUTE	0	Gallons per Day
008	Storm Water		BATCH	DILUTE	0	Gallons per Day
009	Storm Water		BATCH	DILUTE	0	Gallons per Day
002	Storm Water		BATCH	DILUTE	0	Gallons per Day
006	Storm Water		BATCH	DILUTE	0	Gallons per Day
002	Sanitary		CONT	DILUTE	3,330	Gallons per Day
006	Sanitary		CONT	DILUTE	5,267	Gallons per Day
007	Sanitary		CONT	DILUTE	15	Gallons per Day
008	Sanitary		CONT	DILUTE	405	Gallons per Day
010	Sanitary		CONT	DILUTE	1,000	Gallons per Day
009	Sanitary		CONT	DILUTE	1,520	Gallons per Day
803	Process Waste	SP803 from UST	BATCH	DILUTE	1,440	Gallons per Day
008	Plant & Equipment Washdown	includes diagnostic reagents	BATCH	DILUTE	300	Gallons per Day
003	Plant & Equipment Washdown		BATCH	DILUTE	2,814	Gallons per Day
005	Plant & Equipment Washdown		BATCH	DILUTE	690	Gallons per Day
005	Non Contact Cooling Water		CONT	DILUTE	10,700	Gallons per Day
002	Non Contact Cooling Water		BATCH	DILUTE	87,254	Gallons per Day
003	Categorical	414 Sub H PSNS (App A-no)(CWF-no)	CONT	DILUTE	96,672	Gallons per Day
005	Categorical	439 Sub B PSES (CWF-yes)	BATCH	REGULATED	385	Gallons per Day
002	Boiler Blowdown		BATCH	DILUTE	872	Gallons per Day

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO

INDUSTRY NAME

MAILING ADDRESS

CITY

STATE

ZIP

BUSINESS DESC

1020548900

SSM HEALTH CARDINAL
GLENNON CHILDREN'S
HOSPITAL

1465 South Grand Blvd

St. Louis

MO 63104

Pediatric hospital services

SIU

Raw Materials:

Product/Service:

General hospital

Discharge

Component Info:

DISCHARGE COMPONENT PROCESS DESCRIPTION

DISCHARGE IS STREAM IS AVG FLOW UNIT DESC

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT DESC
001	Boiler Blowdown		BATCH	DILUTE	1,265	Gallons per Day
001	Non Contact Cooling Water		CONT	DILUTE	1,710	Gallons per Day
005	Non Contact Cooling Water	Autoclaves	BATCH	DILUTE	325	Gallons per Day
001	Sanitary		CONT	DILUTE	22,680	Gallons per Day
004	Sanitary		CONT	DILUTE	3,200	Gallons per Day
005	Sanitary		CONT	DILUTE	1,120	Gallons per Day
004	Storm Water		BATCH	DILUTE	0	Gallons per Day
005	Storm Water		BATCH	DILUTE	0	Gallons per Day
001	Storm Water		BATCH	DILUTE	0	Gallons per Day
004	Hospital Waste		CONT	DILUTE	2,199	Gallons per Day
005	Hospital Waste		CONT	DILUTE	4,687	Gallons per Day
001	Hospital Waste		CONT	DILUTE	18,742	Gallons per Day
001	Kitchen Waste	Food prep	BATCH	DILUTE	5,000	Gallons per Day

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CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY

STATE

ZIP

BUSINESS DESC

1020548800

SSM HEALTH ST LOUIS
UNIVERSITY HOSPITAL3635 Vista Ave.
P.O. Box 15250

St. Louis

MO

63110 Hospital & psychiatric care

SIU

Raw Materials:

Medical Equipment
Medicines

Product/Service:

General hospital service

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
001	Boiler Blowdown		BATCH	DILUTE	11,485	Gallons per Day	
004	Non Contact Cooling Water		BATCH	DILUTE	281	Gallons per Day	
001	Non Contact Cooling Water	HVAC	BATCH	DILUTE	8,227	Gallons per Day	
002	Sanitary		CONT	DILUTE	21,227	Gallons per Day	
003	Sanitary		CONT	DILUTE	1,910	Gallons per Day	
001	Sanitary		CONT	DILUTE	23,758	Gallons per Day	
005	Sanitary		CONT	DILUTE	2,067	Gallons per Day	
002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
005	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
004	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Hospital Waste	including x-ray waste, lab waste	CONT	DILUTE	18,870	Gallons per Day	
003	Hospital Waste		CONT	DILUTE	1,524	Gallons per Day	
002	Hospital Waste		CONT	DILUTE	6,943	Gallons per Day	
005	Hospital Waste		CONT	DILUTE	848	Gallons per Day	
001	Kitchen Waste		BATCH	DILUTE	7,500	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY STATE ZIP

BUSINESS DESC

SIU CIU

MO 63106 Job shop electroplater

2918 Franklin Avenue

St. Louis

ST LOUIS PLATING CO INC

1030635400

Raw Materials: Chrome, copper, nickel plate baths
Various metallic substrates

Product/Service: Job shop electroplating

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
902	Boiler Blowdown	from SP 902	BATCH	DILUTE	50	Gallons per Day	
001	Boiler Blowdown	from SP 902	BATCH	DILUTE	50	Gallons per Day	
001	Categorical	from SP 902 (includes some rectifier ncw)	BATCH	DILUTE	1,237	Gallons per Day	
902	Categorical	413 Sub A PSES JS L10K(CWF-no) incl rectifier ncw	BATCH	DILUTE	1,237	Gallons per Day	
001	Non Contact Cooling Water		BATCH	DILUTE	1,238	Gallons per Day	
001	Sanitary		CONT	DILUTE	140	Gallons per Day	
002	Sanitary		CONT	DILUTE	60	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	

1020548300

ST LOUIS UNIVERSITY HEALTH SCIENCES CENTER

St. Louis

MO 63104 Institution for health sciences training

SIU

Raw Materials: Laboratory chemicals
Laboratory reagents

Product/Service: Research data

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
003	Boiler Blowdown		BATCH	DILUTE	80	Gallons per Day	
001	Plant & Equipment Washdown		BATCH	DILUTE	400	Gallons per Day	
001	Process Waste	Research labs & animal care	BATCH	DILUTE	36,000	Gallons per Day	
003	Process Waste	Bio-medical research & animal care	BATCH	DILUTE	32,000	Gallons per Day	
002	Sanitary		CONT	DILUTE	700	Gallons per Day	
001	Sanitary		CONT	DILUTE	24,060	Gallons per Day	
003	Sanitary		CONT	DILUTE	3,580	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Regeneration/Reject Water	Water softener	BATCH	DILUTE	400	Gallons per Day	
003	Cooling Tower Blowdown		BATCH	DILUTE	8,814	Gallons per Day	
001	Cooling Tower Blowdown		BATCH	DILUTE	10,300	Gallons per Day	

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1011953300	STERICYCLE INC	6240 McKissock	St Louis	MO	63147	Steam sterilization of medical waste	SIU
Raw Materials:		Product/Service:					
	Medical waste	Medical waste disinfection treatment					
	Caustic soda						
	Polyaceylamide						
	Calcium chloride						
	Off-spec manufacturer's products						
	Sodium hypochloride						
Discharge Component Info:							
SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
004	Boiler Blowdown	Flow from SP 003	CONT	DILUTE	1,750	Gallons per Day	
003	Boiler Blowdown	Discharges to PT	CONT	DILUTE	1,750	Gallons per Day	
003	Plant & Equipment Washdown	Floor scrubber discharged to PT	CONT	DILUTE	1,000	Gallons per Day	
004	Plant & Equipment Washdown	Flow from SP 003	CONT	DILUTE	1,000	Gallons per Day	
003	Process Waste	Steam autoclave, tub wash, P&E wash	BATCH	DILUTE	10,000	Gallons per Day	
004	Process Waste	Flow from SP003	BATCH	DILUTE	10,000	Gallons per Day	
004	Sanitary		CONT	DILUTE	420	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
004	Storm Water		BATCH	DILUTE	0	Gallons per Day	
004	Condensate	Flow from SP 003	BATCH	DILUTE	1,500	Gallons per Day	
003	Condensate	Condensor tower	BATCH	DILUTE	1,500	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO INDUSTRY NAME MAILING ADDRESS CITY STATE ZIP BUSINESS DESC CATEGORIES

1030608700 TRIGEN - ST LOUIS ENERGY CORP 1 Ashley Place St. Louis MO 63102 Generator of Steam and Electricity SIU

Raw Materials: Fuel oil #2
Natural gas
Water
Sodium hypochlorite

Product/Service: Electrical power
Steam power

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT DESC
001	Boiler Blowdown		CONT	DILUTE	25,436	Gallons per Day
001	Plant & Equipment Washdown	General cleaning	BATCH	DILUTE	100	Gallons per Day
007	Process Waste	RO reject and backwash	BATCH	DILUTE	78,473	Gallons per Day
005	Sanitary		CONT	DILUTE	200	Gallons per Day
001	Sanitary		CONT	DILUTE	75	Gallons per Day
008	Sanitary		CONT	DILUTE	100	Gallons per Day
008	Storm Water		BATCH	DILUTE	0	Gallons per Day
005	Storm Water		BATCH	DILUTE	0	Gallons per Day
003	Storm Water		BATCH	DILUTE	0	Gallons per Day
001	Storm Water		BATCH	DILUTE	0	Gallons per Day
007	Storm Water		BATCH	DILUTE	0	Gallons per Day
008	Flow From Offsite		CONT	DILUTE	1	Gallons per Day

PIMS

DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

ACCOUNT NO	INDUSTRY NAME	MAILING ADDRESS	CITY	STATE	ZIP	BUSINESS DESC	CATEGORIES
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1008545900	VA MEDICAL CENTER	915 N. Grand Beulevard	St. Louis	MO	63106	Hospital operations	SIU
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Raw Materials:

Product/Service:

General hospital services

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
001	Boiler Blowdown		BATCH	DILUTE	3,025	Gallons per Day	
001	Non Contact Cooling Water	Autoclaves	CONT	DILUTE	100	Gallons per Day	
003	Plant & Equipment Washdown	Floor mopping office area	BATCH	DILUTE	10	Gallons per Day	
001	Sanitary		CONT	DILUTE	18,000	Gallons per Day	
003	Sanitary		CONT	DILUTE	100	Gallons per Day	
002	Sanitary		CONT	DILUTE	6,000	Gallons per Day	
002	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Hospital Waste		CONT	DILUTE	36,303	Gallons per Day	
002	Hospital Waste		CONT	DILUTE	12,101	Gallons per Day	
001	Laboratory Waste	Diagnostic Labs	BATCH	DILUTE	3,000	Gallons per Day	
002	Laboratory Waste	Diagnostic Lab	BATCH	DILUTE	2,000	Gallons per Day	
001	Kitchen Waste		BATCH	DILUTE	10,372	Gallons per Day	
001	Regeneration/Reject Water		BATCH	DILUTE	2,787	Gallons per Day	
001	Cooling Tower Blowdown		BATCH	DILUTE	8,150	Gallons per Day	
002	Cooling Tower Blowdown		CONT	DILUTE	2,750	Gallons per Day	

7777713200	VALICOR ENVIRONMENTAL SERVICES	5450 Brown Ave.	St. Louis	MO	63120	Centralized waste treatment	SIU
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Raw Materials:

Wastewater

Product/Service:

Used oil
Bottom solids

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
002	Boiler Blowdown		BATCH	DILUTE	1,000	Gallons per Day	
001	Categorical		BATCH	REGULATED	57,000	Gallons per Day	
002	Sanitary	437 Sub D (for B+C) PSNS	CONT	DILUTE	300	Gallons per Day	

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

BUSINESS DESC

STATE ZIP

CITY

MAILING ADDRESS

ACCOUNT NO INDUSTRY NAME

1024353000	WASHINGTON UNIVERSITY MEDICAL SCHOOL	660 S. Euclid Ave., Campus St. Louis Box 8229	MO 63110	Research and teaching facility	SIU
<i>Raw Materials:</i>	Laboratory chemicals & reagents	<i>Product/Service:</i>	Medical school Research institution Research animal care & housing		

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DATA FOR NPDES APPLICATIONS PART F (INDUSTRIAL USER DISCHARGES)

CATEGORIES

ACCOUNT NO INDUSTRY NAME

MAILING ADDRESS

CITY

STATE

ZIP

BUSINESS DESC

Discharge

Component Info:

SP	DISCHARGE COMPONENT	PROCESS DESCRIPTION	DISCHARGE IS	STREAM IS	AVG FLOW	UNIT	DESC
005	Boiler Blowdown		BATCH	DILUTE	39,666	Gallons per Day	
001	Plant & Equipment Washdown		BATCH	DILUTE	468	Gallons per Day	
003	Plant & Equipment Washdown		BATCH	DILUTE	2,179	Gallons per Day	
005	Plant & Equipment Washdown		BATCH	DILUTE	1,996	Gallons per Day	
011	Plant & Equipment Washdown		BATCH	DILUTE	1,700	Gallons per Day	
010	Plant & Equipment Washdown		BATCH	DILUTE	485	Gallons per Day	
007	Plant & Equipment Washdown		BATCH	DILUTE	7,462	Gallons per Day	
009	Plant & Equipment Washdown		BATCH	DILUTE	4,472	Gallons per Day	
008	Plant & Equipment Washdown		BATCH	DILUTE	4,472	Gallons per Day	
005	Process Waste	Photographic & teaching labs	BATCH	DILUTE	840	Gallons per Day	
001	Process Waste	Photographic & teaching labs	BATCH	DILUTE	671	Gallons per Day	
008	Process Waste	Photographic & teaching labs	BATCH	DILUTE	6,412	Gallons per Day	
003	Process Waste	Photographic & teaching labs	BATCH	DILUTE	546	Gallons per Day	
009	Process Waste	Photographic & teaching labs	BATCH	DILUTE	6,412	Gallons per Day	
011	Process Waste	Photographic & teaching labs	BATCH	DILUTE	2,250	Gallons per Day	
003	Sanitary	Photographic & teaching labs	CONT	DILUTE	31,974	Gallons per Day	
001	Sanitary		CONT	DILUTE	5,199	Gallons per Day	
005	Sanitary		CONT	DILUTE	75,445	Gallons per Day	
010	Sanitary		CONT	DILUTE	550	Gallons per Day	
011	Sanitary		CONT	DILUTE	20,000	Gallons per Day	
009	Sanitary		CONT	DILUTE	49,681	Gallons per Day	
008	Sanitary		CONT	DILUTE	49,681	Gallons per Day	
007	Sanitary		CONT	DILUTE	5,248	Gallons per Day	
007	Storm Water		CONT	DILUTE	0	Gallons per Day	
005	Storm Water		BATCH	DILUTE	0	Gallons per Day	
009	Storm Water		BATCH	DILUTE	0	Gallons per Day	
008	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Storm Water		BATCH	DILUTE	0	Gallons per Day	
001	Storm Water		BATCH	DILUTE	0	Gallons per Day	
011	Storm Water		BATCH	DILUTE	0	Gallons per Day	
003	Laboratory Waste	Research labs & animal care	BATCH	DILUTE	23,284	Gallons per Day	
009	Laboratory Waste	Lab research & animal care	CONT	DILUTE	16,560	Gallons per Day	
005	Laboratory Waste	Lab research & animal care and formalin solution	BATCH	DILUTE	93,406	Gallons per Day	
008	Laboratory Waste	Lab research & animal care	CONT	DILUTE	16,560	Gallons per Day	
011	Laboratory Waste	Lab research & animal care	BATCH	DILUTE	8,250	Gallons per Day	
007	Laboratory Waste	Lab research & animal care	BATCH	DILUTE	10,327	Gallons per Day	
001	Laboratory Waste	Research labs	BATCH	DILUTE	1,733	Gallons per Day	

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CATEGORIES

ACCOUNT NO INDUSTRY NAME MAILING ADDRESS CITY STATE ZIP BUSINESS DESC

005	Kitchen Waste						BATCH	DILUTE	9,176	Gallons per Day
009	Regeneration/Reject Water						BATCH	DILUTE	33,618	Gallons per Day
008	Regeneration/Reject Water						CONT	DILUTE	33,618	Gallons per Day
011	Regeneration/Reject Water						BATCH	DILUTE	15,500	Gallons per Day
005	Regeneration/Reject Water						BATCH	DILUTE	32,761	Gallons per Day
001	Regeneration/Reject Water						BATCH	DILUTE	3,518	Gallons per Day
005	Cooling Tower Blowdown						BATCH	DILUTE	88,038	Gallons per Day
011	Cooling Tower Blowdown						BATCH	DILUTE	15,500	Gallons per Day
007	Cooling Tower Blowdown						BATCH	DILUTE	413	Gallons per Day
008	Cooling Tower Blowdown						BATCH	DILUTE	31,057	Gallons per Day
009	Cooling Tower Blowdown						BATCH	DILUTE	31,057	Gallons per Day
001	Cooling Tower Blowdown						BATCH	DILUTE	3,250	Gallons per Day
003	Cooling Tower Blowdown						BATCH	DILUTE	6,120	Gallons per Day

Total Records Selected

50

50

27

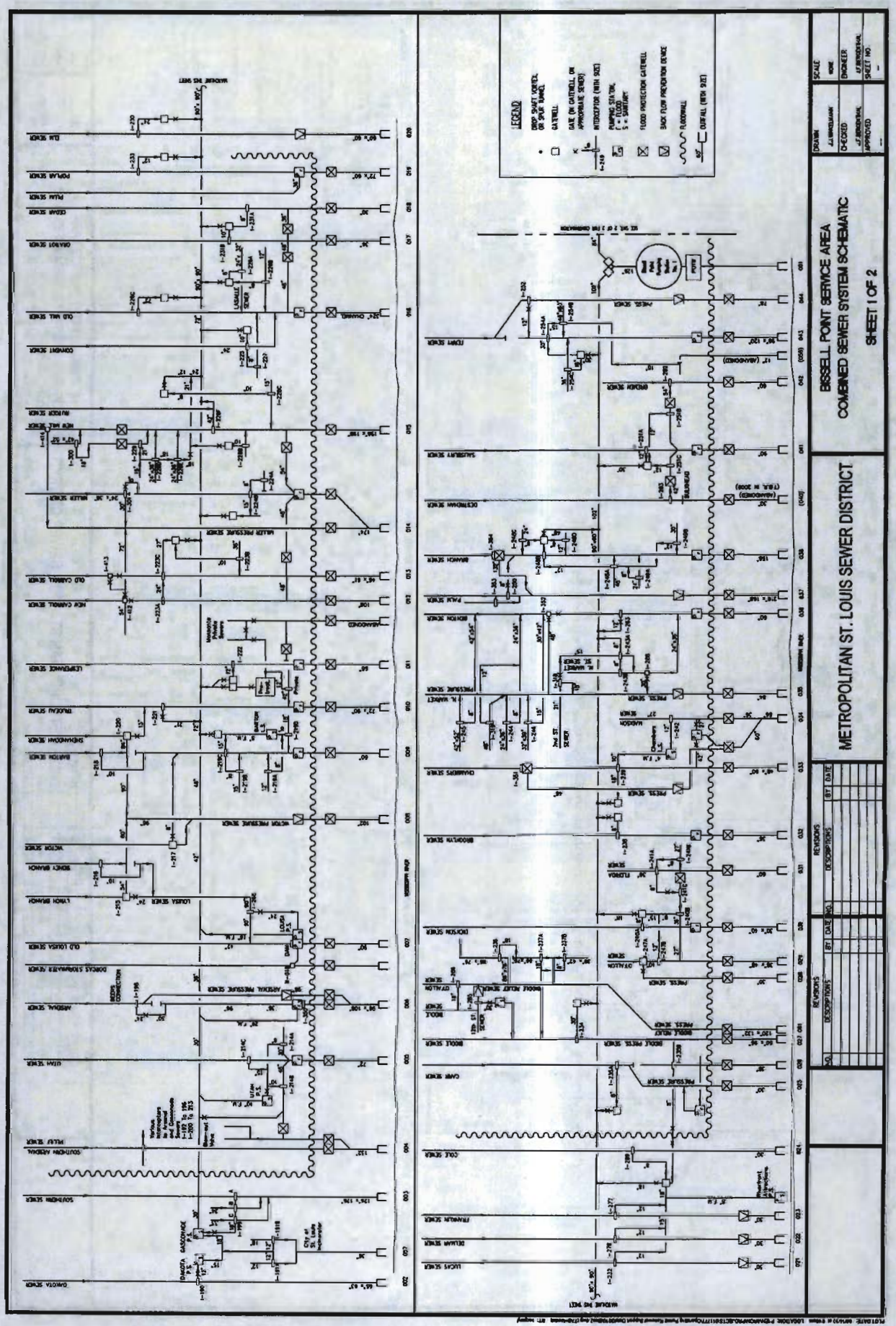
Attachment 21: Waste from Remedial Activities

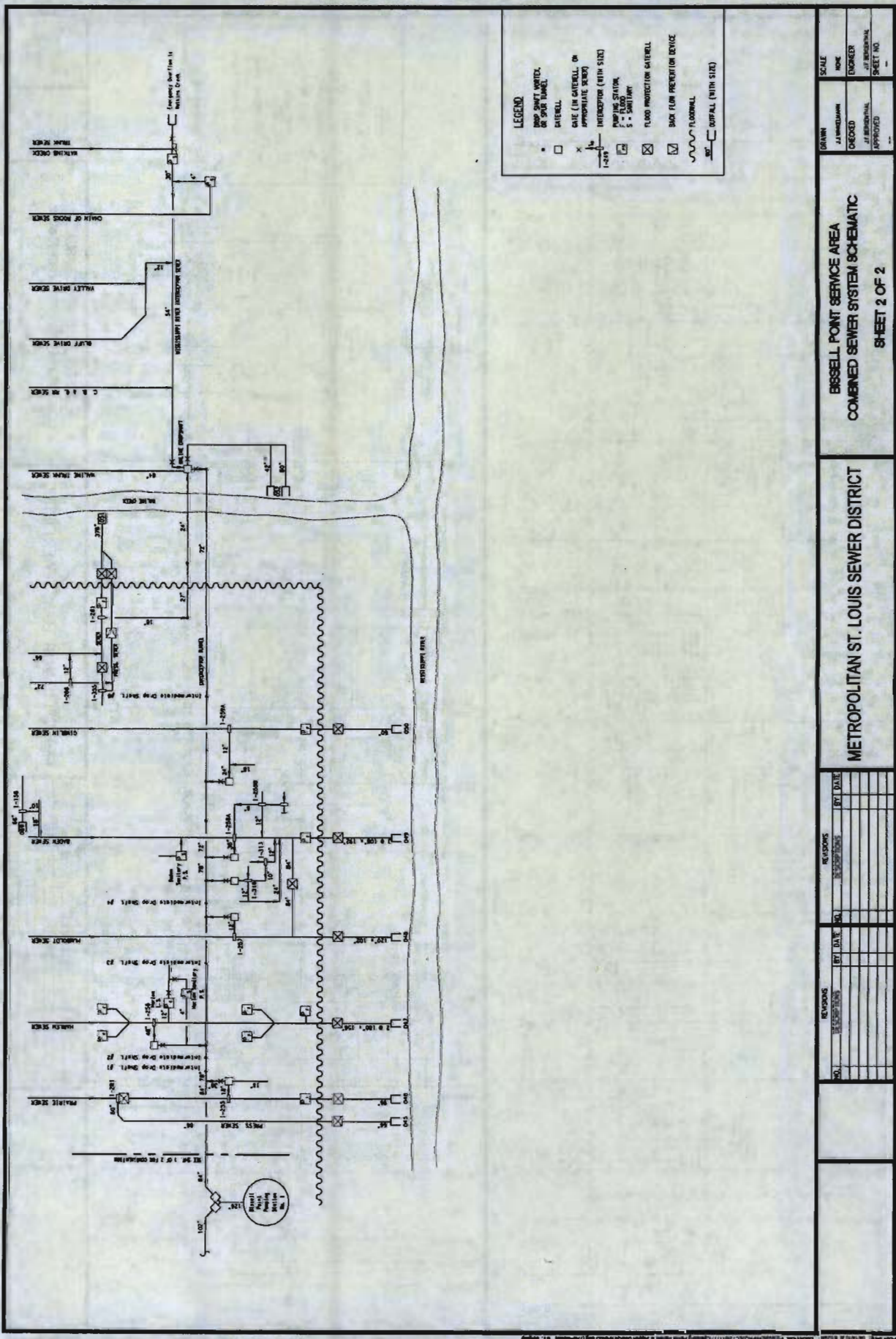
MSD does accept wastewater from remediation sites through our special discharge approval program. These discharges are typically a one-time only discharge. There are currently no on-going discharges in the Bissell Point WWTP service area from remediation sites.

Attachment 22: System Diagram

The following diagram shows all CSO outfalls with outfall numbers. There are no known Sensitive Use Areas affected by CSOs. There are two threatened or endangered species within MSD's combined sewer area: the peregrine falcon and the pallid sturgeon. The pallid sturgeon are endangered because of habitat modifications. Peregrine falcons are endangered because of disturbances to nesting habitat and continued use of environmental contaminants. CSOs are not known to adversely impact the pallid sturgeon or the peregrine falcon or their habitat. Therefore, there are no known impacts from CSOs on threatened or endangered species in MSD's CSO area.

Please see the detailed system maps in the enclosed DVDs.





Attachment 23: CSO Data

Outfall Number	MSD GIS ID Number	Outfall Location*		Elevation (feet)	CSO Monitoring During Last Year	Estimated Typical Year (Year 2000) Characteristics*				Sub-basin Name (8-Digit HUC)	Subwatershed Name (12-Digit HUC)	12-Digit HUC	
		Northing (NAD 83)	Easting (NAD 83)			Distance from Shore (ft)	Annual Total	Event Range	Events per Year				Peak Flow MGD
002	GIS-4684161	997368	997783	392.1	none	41.0	0.00 to 6.0	53	56.0	Mississippi River	Palmer Creek-Mississippi River	71401010507	
003	GIS-4699304	998495	999701	398.58	none	205.3	0.01 to 24.1	82	218.4	Mississippi River	Palmer Creek-Mississippi River	71401010507	
004	GIS-4683517	990342	1001900	387.53	none	304.6	0.02 to 44.5	52	275.5	Mississippi River	Palmer Creek-Mississippi River	71401010507	
005	GIS-1885967	993742	1003282	383.65	none	58.4	0.00 to 7.3	64	69.5	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
006	GIS-6999906	994541	1003921	387.46	none	31.2	0.01 to 5.5	30	63.2	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
007	GIS-1048481	995925	1005513	387.15	none	41.5	0.00 to 7.0	32	96.9	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
008	GIS-4684125	995952	1006395	389.92	none	35.7	0.00 to 3.6	34	36.4	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
009	GIS-1052324	997156	1007271	387.49	none	18.4	0.00 to 9.4	31	53.0	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
010	GIS-2500263	997555	1008023	385.85	none	54.7	0.00 to 1.7	33	23.6	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
011	GIS-4684126	997934	1008729	386.02	none	8.4	0.00 to 3.7	17	52.0	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
012	GIS-4683524	998331	1009799	390.05	none	1.0	0.00 to 0.4	14	11.0	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
013	GIS-4683525	998342	1009817	389.9	none	842.3	0.00 to 146.3	42	842.8	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
014	GIS-4684062	998833	1010827	379.71	none	1,000.1	0.36 to 117.2	46	513.8	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
015	GIS-4684061	997185	1011725	388.42	none	1,006.8	0.54 to 197.2	31	1,502.2	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
016	GIS-1021590	999471	1012411	386.26	none	4.7	0.00 to 1.0	31	9.1	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
017	GIS-4684351	999779	1013397	390.63	none	1.3	0.00 to 0.4	12	7.7	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
018	GIS-4684065	999845	1013641	391.72	none	17.3	0.03 to 2.9	27	16.9	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
019	GIS-4684065	999845	1013641	391.72	none	3.2	0.00 to 0.7	15	15.5	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
020	GIS-4684033	991483	1015537	383.86	none	0.1	0.00 to 0.1	3	1.5	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
021	GIS-4684033	991483	1015537	383.86	none	0.0	0.00 to 0.0	0	0.0	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
022	GIS-4683969	991147	1015507	383.86	none	0.0	0.00 to 0.0	0	0.0	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
023	GIS-4683969	991123	1015535	390.15	none	0.3	0.00 to 0.1	21	1.5	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
024	GIS-4684058	9911264	1015602	390.02	none	2.1	0.00 to 0.4	34	5.1	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
025	GIS-4684059	991344	1019777	388.13	none	0.4	0.00 to 0.1	28	0.7	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
026	GIS-4684052	991346	1019763	388.3	none	3.0	0.01 to 1.4	9	36.6	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
027	GIS-4683941	991400	1020367	381.18	none	1.6	0.00 to 0.3	20	6.2	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
028	GIS-4683513	991443	1021065	386.6	none	1.9	0.00 to 0.0	0	0.0	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
029	GIS-4683938	991401	1021188	386.32	none	1.9	0.00 to 0.4	24	2.9	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
030	GIS-4683938	991401	1021474	386.32	none	0.3	0.00 to 0.1	10	3.3	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
031	GIS-1044770	991363	1022691	385.36	none	1.6	0.00 to 0.3	21	7.6	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
032	GIS-4683937	991121	1023692	386.7	none	0.0	0.00 to 0.0	0	0.0	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
033	GIS-4683791	991004	1025183	384.81	none	12.0	0.00 to 2.0	39	26.8	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
034	GIS-4683913	991092	1025216	390.45	none	10.5	0.00 to 1.7	43	22.1	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
035	GIS-4683505	991045	1028414	390.87	none	20.7	0.00 to 4.0	29	52.2	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
036	GIS-4683506	991044	1028420	390.74	none	382.4	0.00 to 78.9	51	638.1	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
037	GIS-7000286	991038	1028353	391.02	none	184.6	0.00 to 48.7	27	488.1	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
038	GIS-4683912	991037	1028601	389.31	none	19.7	0.00 to 3.4	46	44.8	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
041	GIS-4683751	990954	1031245	384.18	none	0.5	0.00 to 0.1	14	3.3	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
042	GIS-4683753	990404	1031864	384.06	none	16.5	0.01 to 4.3	20	85.7	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
043	GIS-4698232	990805	1034422	387.16	none	49.5	0.00 to 6.6	60	64.9	Mississippi River	Schoenberger Creek-Mississippi River	71401010403	
044	GIS-4683756	990850	1034506	389.14	none	1.0	0.01 to 0.5	9	13.1	Mississippi River	Maline Creek-Mississippi River	71401010401	
045	GIS-4683504	9907306	1037202	395.46	none	39.7	0.01 to 7.5	33	87.0	Mississippi River	Maline Creek-Mississippi River	71401010401	
046	GIS-4683503	9907306	1037249	392.3	none	972.3	0.08 to 238.5	38	1,513.1	Mississippi River	Maline Creek-Mississippi River	71401010401	
047	GIS-4684567	990860	1041456	387.46	none	30.2	0.01 to 4.7	45	48.9	Mississippi River	Maline Creek-Mississippi River	71401010401	
048	GIS-4683444	9901895	1041760	392.36	none	806.9	0.00 to 205.7	40	1,023.2	Mississippi River	Maline Creek-Mississippi River	71401010401	
049	GIS-4683409	9901282	1046886	397.31	none	57.6	0.00 to 11.7	35	53.1	Mississippi River	Maline Creek-Mississippi River	71401010401	
050	GIS-4684561	990861	1054451	400.32	none	129.9	0.02 to 30.5	29	176.3	Mississippi River	Maline Creek-Mississippi River	71401010401	
051	GIS-4684161	990861	1054451	395.5	none	16.7	0.10 to 9.5	5	51.7	Mississippi River	Maline Creek-Mississippi River	71401010401	
052	GIS-4683470	990042	1053837	386.5	none	13.2	0.00 to 1.4	65	13.1	Mississippi River	Maline Creek-Mississippi River	71401010401	
053	GIS-1046967	990003	999318	392.27	none	22.3	0.00 to 6.3	33	31.6	Mississippi River	Maline Creek-Mississippi River	71401010507	
054	GIS-1035234	997204	1049223	386.5	none	82.0	0.00 to 13.6	53	155.6	Mississippi River	Maline Creek-Mississippi River	71401010507	
059	GIS-4683942	991400	1020307	381.18	none	82.0	0.00 to 13.6	53	155.6	Mississippi River	Maline Creek-Mississippi River	71401010403	

Notes:

*These outfall locations were updated to align with current MSD data.

^aThis data provides a summary, by outfall, of the annual overflow volumes and peak flows, the range in event overflow volumes, and the number of overflow events per year. The occurrence of overflow events is based on a 6-hour interval time period. (Source: Metropolitan St. Louis Sewer District Combined Sewer Overflow Long-Term Control Plan, Appendix B.)